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AUTHOR Byler, Bennie L.; Hemp, Paul E.
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ABSTRACT

Among the most crucial problems facing young people today are decisions in the process of vocational development. This study was designed to determine if there are differences in certain aspects of vocational development among the groups of high school agriculture students who plan to enter on-farm agricultural occupations, those who plan to enter off-farm agricultural occupations, and those who plan to enter nonagricultural occupations. The population for this study consisted of all junior and senior students enrolled in secondary agricultural occupations programs in Illinois. Data were gathered using an instrument for personal, family, and community data related to the occupational and educational objectives of Illinois youth, Crites' Vocational Development Inventory, Super's Work Values Inventory, and Haller and Miller's Occupational Aspiration Scale. Forty-nine specific conclusions were drawn based upon the findings of the study, and the findings indicate that there are distinct differences in certain aspects of vocational development among high school agricultural occupations students. (GEB)

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RESEARCH SERIES IN AGRICULTURAL EDUCATION

A STUDY OF FACTORS ASSOCIATED WITH THE VOCATIONAL DEVELOPMENT OF [illegible] AGRICULTURAL OCCUPATIONS [illegible]

by

Bessie L. Byler and Paul E. Hess

Issued by

Division of Agricultural Education
Department of Vocational and Technical Education
College of Education
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A Research Report

A Study of Factors Associated with the Vocational Development of High School Agricultural Occupations Students

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FOREWORD

Vocational development of youth has received increased emphasis in the Vocational Education Amendments of 1968. The current career education movement also includes important aspects of vocational development and growth. This digest reports an important piece of research conducted in Illinois by Dr. Bennie L. Byler.[1/]

The results of this study are both pleasing and challenging. It is pleasing to note that many students have selected an occupation and feel fairly certain that their choice is a wise one. It is also satisfying to find that agriculture teachers, parents and other persons have influenced students in their occupational choice and have helped them think through the vast complex of jobs in the world of work.

This study has produced data which indicate that more effort needs to be made in helping the "nonfarm"-oriented student in his vocational development. Obviously, there are many students enrolled in agricultural occupations classes, even at the junior and senior level, who have not selected an occupation or are unsure about the tentative choices they have made.

Byler's research reminds us that teachers are working with a different breed of student in a modern agricultural occupations department. The job of vocational guidance, occupational orientation and career development is much more complicated today than it was ten or more years ago when most agriculture students came from the farm and aspired to return to the farm. The career ladder has changed and the factors associated with vocational development have changed. This study will help teachers in Illinois and throughout the nation define and appraise the educational job that needs to be done from kindergarten through the postsecondary level.

Paul E. Hemp

1/ Byler, Bennie L. A Study of Factors Associated with the Vocational Development of High School Agricultural Occupations Students. Urbana, Illinois: Unpublished doctoral dissertation, University of Illinois, 1972.

INTRODUCTION

Decisions in the process of vocational development are among the most crucial problems facing young people today. Selecting an occupation and securing the necessary training and education to enter this occupation has an important influence upon the individual and the society in which he lives.

Assisting youth in their vocational development has been a vital concern to educators for many years. However, with the vastly complex technological society which exists in the United States today, the problem of occupational guidance assumes paramount proportions.

Students of agriculture have been greatly affected by the vastly changing and complex occupational structure in agricultural business and industry. The present-day educational programs in agricultural occupations are more diversified than the ones which resulted from earlier legislation.

The job opportunities for students of agriculture continue to increase. However, based upon the projected Illinois manpower needs in agricultural occupations, the larger percentage of the manpower needs is in off-farm agricultural occupations. As the number of persons needed for on-farm agricultural occupations continually decreases, and the number of persons needed for off-farm agricultural occupations continually increases, what are the occupational and educational aspirations of high school agricultural occupations students in Illinois? What are their attitudes toward occupational decision making? What work values do they possess? Are their occupational and educational aspirations influenced by certain personal, family and community-related factors? What problems do they encounter with regard to their occupational and educational decisions? Furthermore, do students who plan to enter on-farm agricultural occupations, students who plan to enter off-farm agricultural occupations, and students who plan to enter nonagricultural occupations, differ in these aspects of vocational development? Finding answers to these and other-related questions was the primary objective of this study.

Statement of the Problem

The purpose of this study was to determine if there are differences in certain aspects of vocational development among the following groups of high school agriculture students:

1. Agriculture students who plan to enter on-farm agricultural occupations.
2. Agriculture students who plan to enter off-farm agricultural occupations.
3. Agriculture students who plan to enter nonagricultural occupations.

The aspects of vocational development that were considered in this study are as follows:

1. Occupational and educational objectives of agriculture students.
2. Personal, family, and community variables related to occupational choice.
3. Vocational maturity.
4. Work values.
5. Level of occupational aspiration.

Background and Significance of the Problem

One of the most important decisions in life is made by many students while enrolled in high school. The selection of an occupation will greatly influence the future of most high school students, and the society in which they live. They are faced with the problems of establishing occupational objectives and obtaining the necessary training and education to attain these occupational aspirations.

The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 indicate that students enrolled in agricultural occupations programs should have an occupational objective. The acts further specify that high school agricultural occupations programs should be directed toward the adequate preparation of each student for his selected occupation. Vocational

education has undergone considerable change during this decade. The scope of vocational education was extended considerably by the provisions of the 1963 and 1968 Vocational Education Acts. These federal acts provided teachers of agricultural occupations an opportunity to change and expand their programs. This legislation provides the authority and establishes a mandate for agricultural educators to prepare high school students for any agricultural occupation in which knowledges and skills in agriculture are required. Prior to the 1963 Act the traditional concept of agricultural education was that of preparing boys for on-farm agricultural occupations.

The student enrollment in high school off-farm agricultural occupations programs in the U.S. has increased from 55,000 students in 1965 to a total of 212,650 students in 1970; the student enrollment in on-farm agricultural occupations has decreased from 461,500 in 1965 to a total of 338,173 students in 1970 (125).

Present-day programs in agricultural occupations are more complex than the ones which resulted from earlier legislation. A student enrolled in agricultural occupations has an ever-increasing number of occupations in agriculture from which to choose.

A small amount of occupational guidance was needed when most of the students enrolled in the high school agricultural occupations program became farmers. However, the guidance responsibilities of the agricultural occupations instructor and vocational guidance counselor have increased tremendously with the increase in number of agricultural occupations available to students.

The teacher of agricultural occupations must assume responsibility as a member of the vocational guidance team if interested students are to find their place in the agricultural world of work. Assisting agriculture students in their vocational development is an important function of the high school agriculture teacher. He must play a greater role in the future because of

greater advances in the agricultural industry, new objectives for vocational education in agriculture, and changes in rural high schools due to consolidation.

Objectives

The primary objective of this research was to determine if there are differences in certain aspects of vocational development among agriculture students who plan to enter on-farm agricultural occupations, agriculture students who plan to enter off-farm agricultural occupations, and agriculture students who plan to enter nonagricultural occupations.

The specific objectives of this research were as follows:

1. Determine the occupational and educational objectives of high school junior and senior agricultural occupations students.
2. Determine if there are differences in personal, family and community variables related to occupational objectives, among high school agricultural occupations students grouped according to their stated occupational choice.
3. Determine if there are differences in vocational maturity as measured by the Crites Vocational Development Inventory, among high school agricultural occupations students grouped according to their stated occupational choice.
4. Determine if there are differences in work values as measured by the Super Work Values Inventory, among high school agricultural occupations students grouped according to their stated occupational choice.
5. Determine if there are differences in level of occupational aspiration as measured by the Haller Occupational Aspiration Scale, among high school agricultural occupations students grouped according to their stated occupational choice.

6. Determine if there are differences in vocational maturity as measured by the Crites Vocational Development Inventory, among high school agricultural occupations students grouped according to their prior type of supervised occupational experience program.
7. Determine if there are differences in work values as measured by the Super Work Values Inventory, among high school agricultural occupations students grouped according to their prior type of supervised occupational experience program.
8. Determine if there are differences in level of occupational aspiration as measured by the Haller Occupational Aspiration Scale, among high school agricultural occupations students grouped according to their prior type of supervised occupational experience program.

EXECUTION OF STUDY

Pilot Study

The first part of this research consisted of a pilot study conducted in cooperation with the Agriculture Department, Armstrong Township High School, Armstrong, Illinois.

The primary objective for conducting the pilot study was to assist the researcher in determining appropriate items to include in the questionnaire designed to collect personal, family, and community variables related to the occupational objectives of high school agricultural occupations students in Illinois. The pilot study also provided the researcher an opportunity to review and revise procedures to be used in collecting the data for the research study.

Population

The population for this study consisted of all junior and senior students enrolled in secondary agricultural occupations programs in Illinois. The

1970-71 Annual Directory of the Teachers of Agricultural Occupations reported that a total of 443 high school agricultural departments in Illinois were in existence during the school year 1970-71 (104).

Sample

A stratified random sample of 21 public schools from all the high schools in Illinois which provide agricultural occupations programs in 1970-71 was selected to participate in the research. Seven schools having a student enrollment of 210 or less, seven schools having a student enrollment of 211-390, and seven schools having a student enrollment of over 390, comprised the low, medium and high enrollment strata, respectively.

In completing the instruments, each student was expected to state his occupational choice. Based upon the student's stated occupational choice, the following groups were identified and studied:

Group 1 Agriculture students who plan to enter on-farm agricultural occupations.

Group 2 Agriculture students who plan to enter off-farm agricultural occupations.

Group 3 Agriculture students who plan to enter nonagricultural occupations.

Instrumentation

The instruments used in collecting the data for this study are as follows:

1. Personal, Family, and Community Data Related to the Occupational and Educational Objectives of Illinois Youth. This instrument was developed to assess the personal, family, and community variables related to the occupational objectives of high school agricultural occupations students. The variables which this instrument is designed to assess are as follows:

a. High school class.

b. Place of residence.

c. Degree of certainty possessed by student regarding choice of occupation.

d. "Significant others" influencing student's occupational choice.

e. Student's perception of his ability to perform selected occupation.

f. Amount of encouragement from father to follow father's occupation.

g. Number of years of post high school education planned.

h. Father's perception of his occupation.

i. Amount of father's education.

j. Amount of mother's education.

k. Amount of encouragement to continue education student has received from father.

l. Amount of encouragement to continue education student has received from mother.

2. Vocational Development Inventory. This instrument devised by Crites (25), was selected to measure the vocational maturity of high school agricultural occupations students. The Attitude Scale of this instrument consists of 50 self-descriptive statements related to an individual's vocational attitudes and behaviors. Concepts used to write items for the Attitude Scale were as follows: involvement in the choice process, orientation toward work, independence in decision making, preference for vocational choice factors, and conceptions of the choice process. In completing the instrument, a student responds to each statement by indicating his

agreement or disagreement with the statement. A vocational maturity score is derived for each student by totaling the number of responses a student makes which are the same as those made by the criterion group for which the scoring key was based.

According to Crites (25) the dispositional response tendencies measured by the Attitude Scale of the Vocational Development Inventory probably change systematically as the adolescent matures vocationally.

3. Work Values Inventory. This instrument was developed by Super (113) for the purpose of assessing the values which motivate man to work. The instrument is designed to "measure the values which are extrinsic to as well as those which are intrinsic in work, the satisfactions which may be the concomitants or outcomes of work" (113, p. 4). According to Super, understanding the value structure of students in vocational counseling, or applicants for an occupation in business or industry, "is thus important as an aid to clarifying goals and to determining the psychological appropriateness of a given type of training or employment" (113, p. 4). The work values which this instrument is designed to assess are as follows:

   a. Altruism. A work value that is present in "work which enables one to contribute to the welfare of others" (113, p. 8).

   b. Esthetic. A work value inherent in "work which permits one to make beautiful things and to contribute beauty to the world" (113, p. 8).

   c. Creativity. A value associated with "work which permits one to invent new things, design new products, or develop new ideas" (113, p. 8).

   d. Intellectual stimulation. Associated with "work which provides opportunity for independent thinking and for learning how and why things work" (113, p. 9).

e. Achievement. A value associated with "work which gives one a feeling of accomplishment in doing a job well" (113, p. 9).

f. Independence. Associated with "work which permits one to work in his own way, as fast or as slowly as he wishes" (113, p. 9).

g. Prestige. Associated with "work which gives one standing in the eyes of others and evokes respect" (113, p. 9).

h. Management. Associated with "work which permits one to plan and lay out work for others to do" (113, p. 9).

i. Economic returns. A value or goal associated with "work which pays well and enables one to have the things he wants" (113, p. 9).

j. Security. Associated with "work which provides one with the certainty of having a job even in hard times" (113, p. 9).

k. Surroundings. A value associated with "work which is carried out under pleasant conditions--not too hot or too cold, noisy, dirty, etc." (113, p. 9).

l. Supervisory relations. A value associated with "work which is carried out under a supervisor who is fair and with whom one can get along" (113, p. 10).

m. Associates. A value characterized by "work which brings one into contact with fellow workers whom he likes" (113, p. 10).

n. Way of life. Associated with the kind of work that "permits one to live the kind of life he chooses and to the type of person he wishes to be" (113, p. 10).

o. Variety. Associated with "work that provides an opportunity to do different types of jobs" (113, p. 10).

4. Occupational Aspiration Scale. This instrument devised by Haller and Miller (47), is an eight-item, multiple-choice instrument based upon 80 of the occupations in the Hatt (56) study of

Occupational and Social Stratification. The Occupational Aspiration Scale is designed to measure the student's level of occupational aspiration, one dimension of the occupational selection process. The instrument "includes items permitting responses at both the realistic and the idealistic expression levels of LOA, each at two goal periods, called career periods in this context, short range (end of schooling) and long range (at age 30)" (47, p. 40).

Research Procedures

After the stratified random sample of 21 schools was selected, the administrator of each high school was informed of the study by letter to seek his cooperation. Upon receiving approval from the administrator, agricultural occupations instructors in each high school were also contacted by letter to seek their cooperation.

Alternative schools were selected to replace those who would not agree to participate in the study. Only two schools from the original sample of 21 schools did not agree to participate.

Upon receiving an affirmative response from 21 schools, the researcher contacted the teachers of agricultural occupations to schedule a visit to their school. A list of participating high schools and their geographic location are presented in Appendix B.

The researcher visited each school during the months of September and October, 1971, to collect data for the study. During the visit to each school, the data collection instruments were administered to the junior and senior agricultural occupations students in attendance. All instruments were completed during school hours in a classroom setting. Instructions were given to each class prior to completing the instruments. The time required to complete the instruments was about 40 minutes.

In completing the instruments, each student was requested to indicate the occupation he planned to enter upon completion of his formal education (Item No. 4 of the Personal, Family, and Community Data Instrument). A student's stated occupational choice became the criteria for which the following groups were identified and studied:

Group 1 Agriculture students who plan to enter on-farm agricultural occupations.

Group 2 Agriculture students who plan to enter off-farm agricultural occupations.

Group 3 Agriculture students who plan to enter nonagricultural occupations.

To assist the researcher in identifying the above groups, the United States Office of Education code classification for agricultural occupations was utilized.

While students were completing the instruments, the teacher of agricultural occupations was asked to complete a survey of the types of supervised occupational experience programs of their students prior to the 1971-72 school year. The types of supervised occupational experience programs included in the survey form are as follows: (1) supervised farming, (2) farm placement, (3) off-farm placement in agribusiness, (4) school-based agricultural experience, and (5) no supervised occupational experience program.

Students were grouped on the basis of their prior type of supervised occupational experience program. The following groups were identified and studied:

1. Student's prior supervised occupational experience program consisted of supervised farming.
2. Student's prior supervised occupational experience program consisted of farm placement.

3. Student's prior supervised occupational experience program consisted of off-farm placement in agribusiness.
4. Student's prior supervised occupational experience program consisted of school-based agricultural experience.
5. Student had no prior supervised occupational experience program.
6. Student's prior supervised occupational experience program consisted of other than above.

Analysis of Data

Data collected from the instruments were transferred to IBM cards and analyzed utilizing computer facilities at the Digital Computer Laboratory, University of Illinois at Urbana-Champaign. Chi square, analysis of variance, and coefficient of correlation tests were used to analyze the data from the instruments.

PRESENTATION AND ANALYSES OF DATA

The data presented in this section are arranged in a manner which brings attention to the specific objectives and hypotheses formulated for this study.

The analyses of the data utilized in this study to test the hypotheses are presented under the following headings:

1. Occupational objectives of junior and senior agricultural occupations students.
2. Personal, family, and community variables related to the occupational objectives of agricultural occupations students.
3. Vocational maturity of agricultural occupations students.
4. Work values possessed by agricultural occupations students.
5. Level of occupational aspiration possessed by agricultural occupations students.

The statistical analyses of the data to test the hypotheses consisted of the use of the following statistics: chi square distribution, analysis of

variance using the F ratio, and coefficient of correlation. Analysis of variance calculations were carried out on the assumption of independence among student groups. All hypotheses were tested at the .05 level of probability.

Occupational Objectives of Junior and Senior Agricultural Occupations Students

One of the objectives of this research study was to determine the occupational choices of eleventh- and twelfth-grade students enrolled in agricultural occupations classes. Item No. 4 of the Personal, Family, and Community Data Questionnaire requested each student to indicate the particular occupation that he planned to enter upon completion of his formal education. The investigator then classified these students into the following groups:

Group 1 Agriculture students who plan to enter on-farm agricultural occupations.

Group 2 Agriculture students who plan to enter off-farm agricultural occupations.

Group 3 Agriculture students who plan to enter nonagricultural occupations.

The number of junior and senior students and percentage of combined grade levels grouped by choice of occupation are presented in Table 1.

Table 1.--Number of Junior and Senior Students and Percentage of Combined Grade Levels Grouped by Choice of Occupation

Group number	Student group	Grade level		Total	Percent
		Junior	Senior		
1	Students who planned to enter on-farm agricultural occupations	67	49	116	22.656
2	Students who planned to enter off-farm agricultural occupations	45	56	101	19.727
3	Students who planned to enter non-agricultural occupations	139	156	295	57.617
	Total	251	261	512	100.00

The U.S. Office of Education code classification for agricultural occupations was utilized in identifying the student groups presented in Table 1.

Over one-half (57.617 percent) of the junior and senior agricultural occupations students planned to enter nonagricultural occupations upon completion of their formal education. Approximately 23 percent of the junior and senior agricultural occupations students planned to enter on-farm agricultural occupations upon completion of their formal education. The specific occupations these students selected consisted almost entirely of farming. Almost 20 percent of the junior and senior agricultural occupations students planned to enter off-farm agricultural occupations upon completion of their formal education. This included the selection of occupations in agricultural mechanics, agricultural supplies and services, agricultural products, ornamental horticulture, agricultural resources, forestry, and professional occupations in agriculture.

Personal, Family, and Community Variables Related to the Occupational Objectives of Agricultural Occupations Students

Hypothesis 1 stated that there will be significant differences in personal, family, and community variables among high school agricultural occupations students grouped according to their stated occupational choice.

The data required to test this hypothesis were collected using the Personal, Family, and Community Data Questionnaire. A total of 12 variables was assessed from the data provided by this instrument. Three variables were analyzed using chi square, and nine variables were analyzed using analysis of variance.

Grade Level

The students participating in this study were juniors and seniors currently enrolled in agricultural occupations courses.

The frequency and percentage of responses to this variable for each student group are presented in Table 2. Approximately 42 percent of the students who

planned to enter on-farm agricultural occupations were seniors. Slightly more than 55 percent of the students who planned to enter off-farm agricultural occupations were seniors; and approximately 53 percent of the students who planned to enter nonagricultural occupations were seniors.

Data collected for this variable were analyzed using the chi square statistic to determine the relationship between student's grade level and student's occupational choice. The chi square value of 4.777 is not significant, which would indicate that the relationship observed between student's grade level and student's occupational choice was likely to have occurred by chance.

Table 2.--Chi Square Test for Relationship Between Student's Grade Level and Student's Choice of Occupation

Grade level	Frequency of responses by groups 1/						Totals	
	Group 1		Group 2		Group 3			
	No.	%	No.	%	No.	%	No.	%
Junior	67	57.76	45	44.55	139	47.12	251	49.02
Senior	49	42.24	56	55.45	156	52.88	261	50.98
Totals	116	100.00	101	100.00	295	100.00	512	100.00
						Chi Square	4.777 ns	

1/ Group 1 = Students who planned to enter on-farm agricultural occupations.
Group 2 = Students who planned to enter off-farm agricultural occupations.
Group 3 = Students who planned to enter nonagricultural occupations.

Place of Residence

Students were asked to indicate if their place of residence was on a farm, in the open country but not on a farm, in a village, or in a city. The responses to this variable are presented in Table 3.

The majority (84.48 percent) of students who planned to enter on-farm agricultural occupations were living on a farm. Over one-half (52.48 percent) of the students who planned to enter off-farm agricultural occupations were living on a farm; and about one-third (33.33 percent) of the students who planned to enter nonagricultural occupations were living on a farm.

Table 3.--Chi Square Test of Relationship Between Student's Place of Residence and Student's Choice of Occupation

Place of residence	Frequency of responses by groups[1/]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
1. On a farm	98	84.48	53	52.48	98	33.33	249	48.73
2. In open country but not on a farm	3	2.59	20	19.80	45	15.31	68	13.31
3. In a village under 2,500	6	5.17	10	9.90	80	27.21	96	18.79
4. In a town of 2,500-10,000	4	3.45	2	1.98	26	8.84	32	6.26
5. In a city over 10,000	5	4.31	16	15.84	45	15.31	66	12.91
Totals	116	100.00	101	100.00	294	100.00	511	100.00
							Chi square 102.095[2/]	

1/ Group 1 = Students who planned to enter on-farm agricultural occupations.
Group 2 = Students who planned to enter off-farm agricultural occupations.
Group 3 = Students who planned to enter nonagricultural occupations.
2/ Significant at the .005 level of probability.

The chi square statistic was applied to the data obtained for this variable to test the relationship of student's place of residence to student's stated occupational choice. A significant ($P. < .005$) relationship does exist between the student's place of residence and the student's choice of occupation. The majority of students living on a farm planned to enter agricultural occupations.

Degree of Certainty Possessed by Student Regarding Choice of Occupation

Students were requested to indicate how certain they were that they will follow their stated choice of occupation. Data collected for this variable were analyzed using a three-way analysis of variance. The sources of variation tested were school size (small, medium, or large), student group (grouped according to choice of occupation), and student grade level (junior or senior).

The analysis of variance for students' responses to this item grouped according to their stated occupational choice resulted in an F ratio of 3.488.

This ratio when tested at the .05 level of probability with 2 and 494 degrees of freedom is significant.

The mean responses to this item for students grouped according to their stated occupational choice are presented in Table 4. To obtain a mean response for each group it was necessary to assign a score to each possible alternative response to this item. The score assigned to each alternative response corresponds to the alternative response number appearing in the questionnaire.

Table 4.--Mean Responses Regarding Degree of Certainty Possessed by Student Regarding Choice of Occupation, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response 1/
1	Students who planned to enter on-farm agricultural occupations	116	2.212
2	Students who planned to enter off-farm agricultural occupations	101	1.991
3	Students who planned to enter non-agricultural occupations	295	1.958
	Total	512	

1/ Response alternatives: 1. I'm not sure that my mind is made up.
2. I'm not too sure, but I think my mind is made up.
3. I feel sure that my mind is made up.

Mean response for Group 1 is significantly ($P. < .05$) greater than the mean response for Groups 2 and 3.

Since a significant F ratio was observed among the means for the three student groups, it was necessary to compare each group mean with every other group mean to determine which means were significantly different. This multiple comparison was accomplished using the Tukey's W-procedure as described by Steele and Torrie in Principles and Procedures of Statistics (105).

The multiple comparison revealed that a mean response of 2.212 for Group 1 is significantly ($P. < .05$) greater than mean responses of 1.991 and 1.958 for Groups 2 and 3, respectively. It may be concluded that students who had selected

on-farm agricultural occupations were more certain of their choice than students who had selected off-farm agricultural occupations and students who had selected nonagricultural occupations.

"Significant Others" Influencing Student's Occupational Choice

Students were requested to indicate the person who had the most influence on their choice of occupation. The frequency and percentage of responses are summarized in Table 5.

The majority of students in all three groups indicated that their father was the person who had the most influence on their choice of occupation. However, almost twice as many students who planned to enter on-farm agricultural occupations considered their father to be the most influencing person as did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations. Others having considerable influence upon the student's choice of occupation included a close friend, a relative, and agriculture instructor.

The chi square statistic was used to analyze the data for this variable to determine the relationship between the person who had the most influence on the student's occupational choice and the type of occupation the student had selected. The chi square value of 65.168 is significant at the .001 level of probability. Consequently, one may conclude that there is a relationship between "significant others" influencing the student's choice of occupation, and the student's occupational choice.

Table 5.--Chi Square Test of Relationship Between "Significant Others" Influencing Student's Occupational Choice and Student's Choice of Occupation

"Significant others"	Frequency of responses by groups[1/]							
	Group 1		Group 2		Group 3		Totals	
	No.	%	No.	%	No.	%	No.	%
1. Father	70	60.35	31	31.00	93	31.63	194	38.04
2. Mother	4	3.45	4	4.00	8	2.72	16	3.14
3. Brother or sister	4	3.45	4	4.00	30	10.20	38	7.45
4. Another relative	11	9.48	10	10.00	24	8.16	45	8.82
5. Counselor	0	.00	2	2.00	5	1.70	7	1.37
6. Close friend	9	7.76	9	9.00	39	13.27	57	11.18
7. Agriculture instructor	7	6.03	10	10.00	4	1.36	21	4.12
8. Another teacher	1	.86	2	2.00	15	5.10	18	3.53
9. Other than above	10	8.62	28	28.00	76	25.86	114	22.35
Totals	116	100.00	100	100.00	294	100.00	510	100.00
							Chi square 65.168[2/]	

1/ Group 1 = Students who planned to enter on-farm agricultural occupations.
Group 2 = Students who planned to enter off-farm agricultural occupations.
Group 3 = Students who planned to enter nonagricultural occupations.
2/ Significant at the .001 level of probability.

Student's Perception of His Ability to Perform Selected Occupation

In responding to this variable, each student was requested to indicate his perception of the ability he has for the occupation selected. A three-way analysis of variance was used in analyzing the data for this variable. The sources of variation that were analyzed are as follows: School size (small, medium, or large), student group (grouped according to choice of occupation), and student grade level (junior or senior).

An F ratio of 4.710 was observed for students' responses to this item, grouped according to their occupational choice. This ratio is significant at

the .01 level of probability for 2 and 493 degrees of freedom. Table 6 summarizes the mean responses to this item by students grouped according to the occupation they planned to enter.

The significant F ratio that was observed among the means for the three student groups made it necessary to compare each group mean with every other group mean in order to determine which means were significantly different.

Using the Tukey's W-procedure for multiple comparison it was determined that the mean response of 4.683 for Group 1 is significantly greater than the mean response of 4.231 for Group 3. This mean difference is significant at the .01 level of probability. It was also found that a mean response of 4.580 for Group 2 is significantly ($P. < .05$) greater than the mean response of 4.231 for Group 3. It may thus be concluded that students who planned to enter on-farm agricultural occupations and students who planned to enter off-farm agricultural occupations considered their ability for selected occupation to be greater than did students who planned to enter nonagricultural occupations.

Table 6.--Mean Responses Regarding Student's Perception of His Ability to Perform Selected Occupation, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response 1/
1	Students who planned to enter on-farm agricultural occupations	116	4.683
2	Students who planned to enter off-farm agricultural occupations	100	4.580
3	Students who planned to enter non-agricultural occupations	295	4.231
	Total	511	

1/ Response alternatives: 1. I don't know because I have not yet made a choice; 2. Very much below average; 3. Somewhat below average; 4. Just average; 5. Somewhat above average; 6. Very much above average.

Mean response for Group 1 is significantly ($P. < .01$) greater than the mean response for Group 3.

Mean response for Group 2 is significantly ($P. < .05$) greater than the mean response for Group 3.

Amount of Encouragement from Father to Follow Father's Occupation

This variable was designed to determine the amount of encouragement students had received from father to follow their father's occupation. Only male students were requested to complete this item.

The analysis of variance for students grouped by their choice of occupation resulted in an F ratio of 3.284. This ratio when tested at the .05 level of probability with 2 and 480 degrees of freedom is significant.

The mean responses to this item for each student group are summarized in Table 7. A multiple comparison of all means revealed that a mean of 2.425 for Group 1 is significantly ($P. < .05$) greater than a mean of 2.239 for Group 2 and a mean of 2.277 for Group 3. Therefore, it may be concluded that students who planned to enter on-farm agricultural occupations had received a greater amount of encouragement from father to follow their father's occupation than students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.

Number of Years of Post High School Education Planned

This item of the questionnaire was designed to provide data regarding the amount of post high school education planned by students. The data collected from this variable were analyzed using the three-way analysis of variance procedure. A significant ($P. < .00001$) F ratio of 24.196 was observed for student's response to this variable grouped on the basis of their occupational choice. No significant differences in responses to this variable were observed for students grouped by their size of high school, and for students grouped according to grade level.

Table 7.--Mean Responses Regarding Amount of Encouragement Student Had Received from Father to Follow Father's Occupation, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response[1/]
1	Students who planned to enter on-farm agricultural occupations	115	2.425
2	Students who planned to enter off-farm agricultural occupations	100	2.239
3	Students who planned to enter non-agricultural occupations	283	2.277
	Total	498	

1/ Response alternatives: 1. Tried to discourage me.
2. Neither tried to encourage or discourage me.
3. Tried to encourage me.

Mean response for Group 1 is significantly ($P. < .05$) greater than the mean response for Groups 2 and 3.

The data in Table 8 report the mean responses to this variable for students grouped on the basis of the occupation they planned to enter. A mean response of 2.595 for Group 2 was found to be significantly greater than the mean responses of 1.823 and 1.938 for Groups 1 and 3, respectively. This difference is significant at the .01 level of probability. No significant differences in mean responses were observed between Group 1 and Group 3. Consequently, it may be concluded that students who had selected off-farm agricultural occupations as their occupational choice planned to receive more post high school education than students who had selected on-farm agricultural occupations and students who had selected nonagricultural occupations.

Father's Perception of His Occupation

In responding to this variable, students were requested to indicate how satisfactory their father considers his present occupation to be.

Table 8.--Mean Responses Regarding Amount of Further Education Beyond High School Planned by Student, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response 1/
1	Students who planned to enter on-farm agricultural occupations	116	1.823
2	Students who planned to enter off-farm agricultural occupations	101	2.595
3	Students who planned to enter non-agricultural occupations	294	1.938
	Total	511	

1/ Response alternatives:
1. None.
2. Two years or less.
3. Three or four years.
4. Five or six years.
5. Seven or more years.

Mean response for Group 2 is significantly ($P. < .01$) greater than the mean response for Groups 1 and 3.

A three-way analysis of variance for responses to this variable revealed no significant differences for students grouped by size of high school, choice of occupation, or grade level. As indicated by the mean responses presented in Table 9 it may be concluded that students considered their fathers to be fairly satisfied with their present occupations.

Amount of Father's Education

The data received from this variable were analyzed using a three-way analysis of variance. A significant F ratio of 4.703 was observed among the mean responses for students grouped by size of high school. This F ratio is significant at the .005 level of probability. A summary of the mean responses regarding the amount of father's education for students grouped by size of high school is presented in Table 10.

Table 9.--Mean Responses Regarding Father's Perception of His Occupation as Indicated by Student, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response[1/]
1	Students who planned to enter on-farm agricultural occupations	115	4.080
2	Students who planned to enter off-farm agricultural occupations	99	3.973
3	Students who planned to enter non-agricultural occupations	287	4.048
	Total	501	

1/ Response alternatives:
1. Very poor.
2. Not very good.
3. Good enough.
4. Fairly satisfactory.
5. Completely satisfactory.

Table 10.--Mean Responses Regarding Amount of Father's Education, for Students Grouped by Size of High School

School size	Number	Mean response[1/]
Small	118	3.032
Medium	136	3.544
Large	250	3.411
Total	504	

1/ Response alternatives:
1. Less than 8 grades.
2. 8 grades.
3. 9-11 grades.
4. 12 grades.
5. Some college.
6. College degree

Mean responses for students attending medium and large schools are significantly ($P. < .01$) greater than the mean response for students attending small schools.

A mean response of 3.032 for students attending small high schools is significantly ($P. < .01$) less than the mean responses for students attending medium and large high schools. Consequently, it may be concluded that students who attended small high schools have fathers who have completed less formal education than fathers of students who attended medium and large high schools.

Table 11 presents the mean responses to this variable for students grouped by choice of occupation.

Table 11.--Mean Responses Regarding Amount of Father's Education for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response[1/]
1	Students who planned to enter on-farm agricultural occupations	115	3.386
2	Students who planned to enter off-farm agricultural occupations	100	3.418
3	Students who planned to enter non-agricultural occupations	289	3.184
	Total	504	

1/ Response alternatives:
1. Less than 8 grades.
2. 8 grades.
3. 9-11 grades.
4. 12 grades.
5. Some college
6. College degree.

No significant differences were observed among the mean responses for Groups 1, 2, and 3. The majority of students had fathers who possessed less than a high school education.

Amount of Mother's Education

Students were asked to indicate the amount of formal education possessed by their mother. A three-way analysis of variance for responses to this variable revealed no significant differences for students grouped by size of high school, choice of occupation, or grade level.

The mean responses to this item for students grouped by choice of occupation are reported in Table 12. A mean of less than 4.0 would indicate that mothers of most students had less than a high school education.

Table 12.--Mean Responses Regarding Amount of Mother's Education, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response 1/
1	Students who planned to enter on-farm agricultural occupations	116	3.866
2	Students who planned to enter off-farm agricultural occupations	101	3.886
3	Students who planned to enter non-agricultural occupations	293	3.631
	Total	510	

1/ Response alternatives:
1. Less than 8 grades.
2. 8 grades.
3. 9-11 grades.
4. 12 grades.
5. Some college.
6. College degree.

Amount of Encouragement to Continue Education Beyond High School Student Has Received from Father

Each student was requested to indicate the amount of encouragement to continue education beyond high school he had received from his father.

A three-way analysis of variance was used to analyze the data from this variable. An F ratio of 11.749 was observed among the mean responses for students grouped according to their choice of occupation. With 2 and 487 degrees of freedom, this F ratio is significant at the .00001 level of probability.

The mean responses to this variable for students grouped by choice of occupation are revealed in Table 13. A multiple comparison of all group means indicated that a mean response of 4.325 for Group 2 is significantly greater than mean responses for 3.815 and 3.791 for Groups 1 and 3, respectively. This difference is significant at the .01 level of probability. No significant differences were observed between the mean responses of Group 1 and Group 3. It may be concluded that students who planned to enter off-farm agricultural occupations received more encouragement to obtain post high school education than did students

who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.

Amount of Encouragement to Continue Education Beyond High School Student Has Received from Mother

Students were asked to report the amount of encouragement they had received from their mother to continue education beyond high school. A three-way analysis of variance was used to analyze the data from this item. An F ratio of 9.141 for the mean responses of students grouped according to their choice of occupation was found to be significant at the .001 level of probability.

Table 13.--Mean Responses Regarding Amount of Encouragement to Continue Education Student Had Received from Father, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response 1/
1	Students who planned to enter on-farm agricultural occupations	115	3.815
2	Students who planned to enter off-farm agricultural occupations	100	4.325
3	Students who planned to enter non-agricultural occupations	290	3.791
	Total	505	

1/ Response alternatives:
1. Feels that I should quit high school and go to work.
2. Feels that I would be better off going to work after high school.
3. Has never said much about it.
4. Has given me some encouragement to continue.
5. Has strongly encouraged me to continue.

Mean response for Group 2 is significantly ($P. < .01$) greater than the mean responses for Groups 1 and 3.

Table 14 summarizes the mean responses to this item for each student group. A multiple comparison of all group means revealed that a mean response of 4.462 for Group 2 is significantly ($P. < .01$) greater than the mean response for 3.998 for Group 1 and the mean response of 4.034 for Group 3. No significant differences were observed between the mean responses of Groups 1 and 3.

Table 14.--Mean Responses Regarding Amount of Encouragement to Continue Education Student Had Received from Mother, for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean response[1/]
1	Students who planned to enter on-farm agricultural occupations	116	3.998
2	Students who planned to enter off-farm agricultural occupations	101	4.462
3	Students who planned to enter non-agricultural occupations	293	4.034
	Total	510	

1/ Response alternatives:
1. Feels that I should quit high school and go to work.
2. Feels that I would be better off going to work after high school.
3. Has never said much about it.
4. Has given me some encouragement to continue.
5. Has strongly encouraged me to continue.

Mean response for Group 2 is significantly ($P. < .01$) greater than the mean responses for Groups 1 and 3.

It may be concluded that students who planned to enter off-farm agricultural occupations received more encouragement from their mother to continue education beyond high school than did students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.

Vocational Maturity of Agricultural Occupations Students

Hypothesis 2 stated that there will be significant differences in vocational maturity as measured by the Crites Vocational Development Inventory, among high school agricultural occupations students grouped according to their stated occupational choice.

The data utilized in testing this hypothesis were collected using the Vocational Development Inventory developed by Crites. The Attitude Scale of this instrument yields a vocational maturity score for each student. The possible range of scores is 0 to 50, from low to high vocational maturity.

A three-way analysis of variance was applied to the scores received from the Attitude Scale of this instrument. The sources of variation that were tested are as follows: school size (small, medium, or large), student group (grouped according to choice of occupation), and student grade level (junior or senior).

An F ratio of 5.119 was observed for the mean vocational maturity scores of students grouped according to their stated occupational choice. This F ratio with 2 and 494 degrees of freedom is significant at the .005 level of probability. A significant ($P. < .01$) F ratio of 5.551 for the mean vocational maturity scores of students grouped by grade level was also observed.

The mean vocational maturity scores for students grouped by their stated occupational choice are presented in Table 15. Since a significant F ratio was observed among the mean vocational maturity scores for the three student groups, it was necessary to determine which means were significantly different.

Table 15.--Mean Vocational Maturity Scores for Students Grouped by Choice of Occupation

Group number	Student Group	Number	Mean score
1	Students who planned to enter on-farm agricultural occupations	116	35.649
2	Students who planned to enter off-farm agricultural occupations	101	36.396
3	Students who planned to enter non-agricultural occupations	295	34.274
	Total	512	

Mean score for Group 2 is significantly ($P. < .01$) greater than the mean score for Group 3.

Mean score for Group 2 is significantly ($P. < .05$) greater than the mean score for Group 1.

A multiple comparison of all means indicated that a mean vocational maturity score of 36.396 for Group 2 was significantly greater than a mean vocational maturity score of 34.274 for Group 3. This difference is significant at the

.01 level of probability. It was also revealed that a mean vocational maturity score of 36.396 for Group 2 is significantly ($P. < .05$) greater than a mean vocational maturity score of 35.649 for Group 1. No significant difference was observed between the mean vocational maturity scores of Group 1 and 3.

Table 16 summarizes the mean vocational maturity scores for students grouped according to their grade level.

Table 16.--Mean Vocational Maturity Scores for Students Grouped by Grade Level

Grade level	Number	Mean score
Junior	251	34.793
Senior	261	36.087
Total	512	

Mean score for senior students is significantly ($P. < .01$) greater than the mean score for junior students.

A mean vocational maturity score of 36.087 for senior students is significantly greater than the mean vocational maturity score of 34.793 for junior students. The difference in means is significant at the .01 level of probability. This finding supports Crites' hypothesis that students' vocational maturity normally increases with age and grade level (24) (25).

From the results of the vocational maturity scores, it may therefore be concluded that students who planned to enter off-farm agricultural occupations are more vocationally mature than students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.

Hypothesis 3 stated that there will be significant differences in vocational maturity as measured by the Crites Vocational Development Inventory, among high school agricultural occupations students grouped according to their prior type of supervised occupational experience program.

The data used to group students were obtained by requesting the teacher of agricultural occupations to complete a survey of the prior type of supervised

occupational experience program for each student participating in the study. Students were then grouped according to their prior type of supervised occupational experience program. Table 17 summarizes the number of junior and senior students represented in each group.

A three-way analysis of variance was used to test this hypothesis. Sources of variation considered were as follows: school size (small, medium, or large), student group (prior type of supervised occupational experience program), and student grade level (junior or senior).

The small number of students represented in Groups 2, 4, and 6, resulted in some empty cells within the analysis of variance matrix. Consequently, these groups had to be deleted to complete the analyses.

The analysis of variance for student groups resulted in an F ratio of .567. This ratio when tested at the .05 level of probability with 2 and 469 degrees of freedom is not significant. The mean vocational maturity scores for students grouped according to their prior type of supervised occupational experience program are reported in Table 18.

Since no significant differences were observed, it may therefore be concluded that the student's vocational maturity is not related to prior type of supervised occupational experience program.

Work Values Possessed by Agricultural Occupations Students

Hypothesis 4 stated that there will be significant differences in work values as measured by the Super Work Values Inventory, among agricultural occupations students grouped according to their stated occupational choice.

The data required to test this hypothesis were collected using the Super Work Values Inventory. This instrument consisted of 45 items designed to measure 15 work values: Creativity, Management, Achievement, Surroundings, Supervisory Relations, Way of Life, Security, Associates, Esthetics, Prestige, Independence, Variety, Economic Return, Altruism and Intellectual Stimulation. These work values comprised the variables to be tested for this hypothesis.

Table 17.--Number of Junior and Senior Students and Percentage of Combined Grade Levels Grouped by Prior Type of Supervised Occupational Experience Program

Group level	Frequency													
	Group 1		Group 2		Group 4		Group 4		Group 5		Group 6		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Junior	142	53.99	3	30.00	10	41.67	5	38.46	91	45.50	0	.00	251	49.02
Senior	121	46.01	7	70.00	14	58.33	8	61.54	109	54.50	2	100.00	261	50.98
Totals	263	100.00	10	100.00	24	100.00	13	100.00	200	100.00	2	100.00	512	100.00
Percent Totals	51.37		0.95		4.69		2.54		39.06		.39			

Group 1 = Student's prior supervised occupational experience program consisted of supervised farming.
Group 2 = Student's prior supervised occupational experience program consisted of farm placement.
Group 3 - Student's prior supervised occupational experience program consisted of off-farm placement in agricultural business.
Group 4 = Student's prior supervised occupational experience program consisted of school-based agricultural experience.
Group 5 = Student had no prior supervised occupational experience program.
Group 6 = Student's prior supervised occupational experience program consisted of other than above.

Table 18.--Mean Vocational Maturity Scores for Students Grouped According to Prior Type of Supervised Occupational Experience Program

Student group	Number	Mean score
Student's prior supervised occupational experience program consisted of supervised farming	263	35.276
Student's prior supervised occupational experience program consisted of off-farm placement in agricultural business	24	34.772
Student had no prior supervised occupational experience program	200	34.241
Total	487	

Each work value has a possible value of 5, 4, 3, 2, or 1 and the total of the values assigned to the three items for each of the 15 work values yield a total score for each work value. Therefore, each work value may have a score as high as 15 or as low as 3 for each student.

"Creativity"

This value is associated with "work which permits one to invent new things, design new products, or develop new ideas" (113, p. 8). Data collected for this variable were analyzed using a three-way analysis of variance. The sources of variation that were tested are as follows: school size (small, medium, or large), student group (grouped according to choice of occupation), and student grade level (junior or senior).

The analysis of variance for students' scores of this work value resulted in an F ratio of .048. This ratio when tested at the .05 level of probability with 2 and 494 degrees of freedom is not significant. The mean scores of each work value for students grouped by choice of occupation are presented in Table 19. Since a significant F ratio was not observed for scores on this work value, it may be concluded that students grouped by their stated occupational choice did not differ in the importance they ascribed to the work value "Creativity."

Table 19.--Mean Work Values Scores for Students Grouped by Choice of Occupation

Work values	Student group[1/] Group 1 Mean scores	Group 2 Mean scores	Group 3 Mean scores	Probability levels among group means
Creativity	10.988	10.889	10.904	
Management	9.018	9.369	9.635	
Achievement	13.390	12.791	12.676	1> 2 = .05 1> 3 = .01
Surroundings	11.662	11.145	11.884	1, 3> 2 = .05
Supervisory relations	11.554	11.866	12.661	3> 2 = .05 3> 1 = .01
Way of life	13.492	13.497	13.215	
Security	12.632	12.564	12.951	
Associates	10.166	10.428	10.815	
Esthetics	8.705	8.636	8.954	
Prestige	11.013	11.148	11.569	
Independence	13.274	12.021	11.458	1> 2, 3 = .01
Variety	11.222	10.789	10.582	
Economic return	11.821	11.850	12.958	3> 1, 2 = .01
Altruism	10.929	11,810	11,433	2> 1 = .05
Intellectual stimulation	11.373	11.388	11.131	

1/ Group 1 = Students who planned to enter on-farm agricultural occupations.
Group 2 = Students who planned to enter off-farm agricultural occupations.
Group 3 = Students who planned to enter nonagricultural occupations.

"Management"

This value is associated with "work which permits one to plan and lay out work for others to do" (113, p. 9). A three-way analysis of variance was used to test this variable. An F ratio of 1.681 for mean scores of students grouped according to their stated occupational choice is not significant at the .05 level of probability.

The mean scores of this work value for the three student groups are reported in Table 19. From the analysis of the data for this variable, it may be concluded that students grouped by their choice of occupation did not differ in the importance they attributed to the work value "Management" in their life's work.

"Achievement"

This value is associated with "work which gives one a feeling of accomplishment in doing a job well" (113, p. 9). The student scores for this variable were analyzed using a three-way analysis of variance for school size, student group, and grade level as the sources of variation.

The analysis of variance for mean scores of students grouped according to their choice of occupation resulted in an F ratio of 4.501. This ratio when tested at the .01 level of probability with 2 and 494 degrees of freedom is significant.

Table 19 reports the mean scores of each student group for this work value. Since a significant F ratio was observed among the three student groups, it was necessary to compare each group mean with every other group mean. This multiple comparison was made using the Tukey's W-procedure as described by Steele and Torrie in Principles and Procedures of Statistics (105).

The multiple comparison reveals that a mean score of 13.390 for Group 1 is significantly greater than a mean score of 12.791 for Group 2. This difference is significant at the .05 level of probability. The mean score for Group 1 was also found to be significantly ($P. < .01$) greater than a mean score of 12.676 for Group 3. Therefore, it may be concluded that students who planned to enter on-farm agricultural occupations placed greater importance on the work value "Achievement" than did students who planned to enter off-farm agricultural occupations and students who plan to enter nonagricultural occupations.

"Surroundings"

This value is associated with "work which is carried out under pleasant conditions--not too hot or too cold, noisy, dirty, etc." (113, p. 9). A summary of the three-way analysis of variance used to analyze the scores for this variable is revealed in Table 34, page 93. A significant ($P. < .05$) F ratio of 3.217 was observed for mean scores of students grouped by choice of occupation. A multiple comparison of all group means indicated that a mean score of 11.884 for Group 3 and a mean score of 11.662 for Group 1 are significantly ($P. < .05$) greater than a mean score of 11.145 for Group 2 (Table 31, page 88). Consequently, it may be concluded that students who planned to enter on-farm agricultural occupations, and students who planned to enter nonagricultural occupations viewed the work value "Surroundings" to be of greater importance than did students who planned to enter off-farm agricultural occupations.

"Supervisory Relations"

This value is associated with "work which is carried out under a supervisor who is fair and with whom one can get along" (113, p. 10). Data collected for this variable were analyzed using a three-way analysis of variance. A summary of the analysis of variance is reported in Table 35, page 94.

An F ratio of 6.322 for scores on this variable among students grouped by their choice of occupation is significant at the .001 level of probability. The analysis of variance also revealed a significant ($P. < .005$) F ratio of 7.995 for scores of students grouped by grade level. The mean score for junior students was 11.656, compared to a mean score of 12.397 for senior students.

The mean scores for this work value by each student group is summarized in Table 19. A mean score of 12.661 for Group 3 is significantly greater than a mean score of 11.866 for Group 2. This difference is significant at the .05 level

of probability. It was also found that the mean score for Group 3 is significantly greater than a mean score of 11.554 for Group 1. This difference in means is significant at the .01 level of probability. Therefore, it may be concluded that students who planned to enter nonagricultural occupations placed greater importance on the work value "Supervisory Relations" than did students who planned to enter on-farm and off-farm agricultural occupations.

"Way of Life"

This value is associated with the kind of work that "permits one to live the kind of life he chooses and to be the type of person he wishes to be" (113, p. 10). The scores for this work value were analyzed using a three-way analysis of variance. Since no significant differences were observed among student scores it may be concluded that students grouped by choice of occupation placed relatively equal importance on the work value "Way of Life."

"Security"

This value is associated with "work which permits one with the certainty of having a job even in hard times" (113, p. 9). The three-way analysis of variance used to analyze the data for this work value revealed no significant F ratios for any of the sources of variation analyzed.

The mean scores of this work value for students grouped by choice of occupation are presented in Table 19. The results from the analysis of the data for this variable indicate that these students did not differ in the importance placed on the work value "Security."

"Associates"

This value is characterized by "work which brings one into contact with fellow workers whom he likes" (113, p. 10). Scores for this variable were analyzed using a three-way analysis of variance. The F ratios resulting from the analysis of variance for school size, student group, and student grade level are not significant at the .05 level of probability.

Table 19 reveals the mean scores of this work value for students grouped by choice of occupation. Since no significant differences were observed among student groups, it may be concluded that students grouped by choice of occupation did not differ in the relative importance placed on the work value "Associates."

"Esthetics"

This value is inherent in "work which permits one to make beautiful things and to contribute beauty to the world" (113, p. 8). The data required to test this variable were analyzed using a three-way analysis of variance. No significant F ratios were observed among any of the sources of variation tested.

The mean scores of this variable for students grouped by choice of occupation are presented in Table 19. Since there were no significant differences in mean scores, it may be concluded that students grouped by choice of occupation placed relatively equal importance on the work value "Esthetics."

"Prestige"

This work value is associated with "work which gives one standing in the eyes of others and evokes respect" (113, p. 9). A three-way analysis of variance was used in analyzing the mean scores for this work value. As in all of the work values tested, the sources of variation were school size, student group, and student grade level.

A significant F ratio of 3.182 with 2 and 494 degrees of freedom for school size is significant at the .05 level of probability. A mean score of 11.675 for students attending small schools is significantly greater than the mean scores of 10.994 and 11.071 for students attending medium and large schools, respectively. This difference is significant at the .05 level of probability.

No significant differences were observed among the mean scores of students grouped by choice of occupation (Table 19) or by grade level. Therefore, it may be inferred that students grouped by choice of occupation considered the work value "Prestige" to be of relatively equal importance.

"Independence"

This value is associated with "work which permits one to work in his own way, as fast or as slowly as he wishes" (113, p. 9). The scores obtained for this work value were analyzed using a three-way analysis of variance. An F ratio of 18.097 was observed for students' scores on this variable grouped by choice of occupation. This ratio is significant at the .000001 level of probability for 2 and 494 degrees of freedom.

Table 19 summarizes the mean scores of this work value for each student group. Using Tukey's W-procedure for multiple comparison of all group means, it was determined that the mean score of 13.274 for Group 1 is significantly greater than the mean score of 12.021 for Group 2 and the mean score of 11.458 for Group 3. This difference in means is significant at the .01 level of probability. Consequently, it may be inferred that students who planned to enter on-farm agricultural occupations considered the work value "Independence" to be of greater importance in life's work than did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.

"Variety"

This value is associated with "work that provides an opportunity to do different types of jobs" (113, p. 10). The data collected for this variable were analyzed using a three-way analysis of variance. The analysis of variance resulted in no significant F ratios for the mean scores of students grouped by school size and by choice of occupation. However, a significant ($P. < .05$) F ratio of 3.771 was observed for mean scores of students grouped by grade level. A mean score of 11.136 for senior students is significantly greater than a mean score of 10.593 for junior students.

From the analysis of the data collected for this variable, it may be concluded that students grouped by choice of occupation placed relatively equal importance on the work value "Variety."

"Economic Return"

This value of goal is associated with "work which pays well and enables one to have the things he wants" (113, p. 9). A three-way analysis of variance was used to analyze students' scores received from this variable. An F ratio of 9.353 for mean scores of students grouped by choice of occupation was found to be significant at the .0001 level of probability.

A multiple comparison of all group means revealed that a mean score of 12.958 for Group 3 is significantly ($P. < .01$) greater than a mean score of 11.821 for Group 1 and a mean score of 11.850 for Group 2 (Table 19). Therefore, it may be concluded that students who planned to enter nonagricultural occupations considered the work value "Economic Return" to be of greater importance in life's work than did students who planned to enter agricultural occupations.

"Altruism"

This value or goal is present in "work which enables one to contribute to the welfare of others" (113, p. 8). The three-way analysis of variance was used to analyze the data for this variable. A significant F ratio of 3.301 was observed among mean scores for student groups. A multiple comparison of all group means revealed that a mean score of 11.810 for Group 2 is significantly greater than a mean score of 10.929 for Group 1 (Table 19). This difference is significant at the .05 level of probability. No significant differences were observed among the other possible mean score comparisons. Consequently, it may be concluded that students who planned to enter off-farm agricultural occupations placed greater importance on the work value "Altruism" than did students who planned to enter on-farm agricultural occupations.

"Intellectual Stimulation"

This value is associated with "work which provides opportunity for independent thinking and for learning how and why things work" (113, p. 9). Data collected for this variable were analyzed using a three-way analysis of variance. No

significant F ratios were observed for mean scores of students grouped by sch size, choice of occupation, or grade level.

The mean scores of this work value for students grouped by choice of occ are revealed in Table 19. Since no significant differences were observed amo mean scores for this variable, it may be concluded that students participatin in this study placed relatively equal importance on the work value "Intellect Stimulation."

Hypothesis 5 stated that there will be significant differences in work values as measured by the Super Work Values Inventory among high school agric occupations students grouped according to their prior type of supervised occu experience program. The purpose of this hypothesis was to determine if stude grouped by previous type of supervised occupational experience program would in the work values they possess.

Data required to test this hypothesis were collected using Super's Work Values Inventory. The 15 work values this instrument is designed to measure were discussed earlier in this text. To test this hypothesis, it was necessa to group students according to their prior type of supervised occupational experience program. This procedure is described earlier in this report. The number of junior and senior students represented in each group was revealed i Table 17. Due to the small number of students represented it was again neces to delete Groups 2, 4, and 6 to complete the analyses.

The mean scores of each of the 15 work values for students grouped by th prior type of supervised occupational experience program are reported in Tabl The data collected to test this hypothesis were analyzed using a three-way analysis of variance. Sources of variation considered were as follows: scho size (small, medium, or large schools), student group (prior type of supervis occupational experience program), and student grade level (junior or senior).

The three-way analysis of variance used to test each of the 15 variables for this hypothesis revealed no significant F ratios for the mean scores of any of the 15 work values among students grouped by prior type of supervised occupational experience program.

From the results of the analysis of data collected for this hypothesis, it may be concluded that the work values possessed by students were not related to the type of supervised occupational experience program they had conducted.

Level of Occupational Aspiration Possessed by Agricultural Occupations Students

Hypothesis 6 stated that there will be significant differences in level of occupational aspiration as measured by the Haller Occupational Aspiration Scale, among high school agricultural occupations students grouped according to their stated occupational choice.

The data utilized in testing this hypothesis were collected using the Haller Occupational Aspiration Scale. This scale yields a level of occupational aspiration score for each student. The possible range of scores is from 0 to 72, from low to high level of occupational aspiration.

A three-way analysis of variance was applied to the scores received from the Occupational Aspiration Scale. The sources of variation that were considered are as follows: school size (small, medium or large), student group (grouped by choice of occupation), and student grade level (junior or senior).

An F ratio of 14.505 was observed for mean level of occupational aspiration scores of students grouped according to their stated occupational choice. This F ratio was 2 and 494 degrees of freedom is significant at the .0001 level of probability.

Table 20.--Mean Work Values Inventory Scores for Students Grouped by Prior Type of Supervised Occupational Experience Program

Work values	Student group[1/] Group 1 Mean scores	Group 2 Mean scores	Group 3 Mean scores
Creativity	11.019	10.231	10.900
Management	9.301	9.803	9.531
Achievement	13.062	12.547	12.727
Surroundings	11.528	12.069	11.890
Supervisory Relations	12.068	12.797	12.674
Way of Life	13.351	13.519	13.300
Security	12.734	12.417	12.907
Associates	10.436	11.244	10.822
Esthetics	8.819	9.142	8.928
Prestige	11.167	11.767	11.503
Independence	12.264	12.078	11.519
Variety	10.823	11.114	10.708
Economic Return	12.283	13.314	12.870
Altruism	11.600	11.022	11.204
Intellectual Stimulation	11.453	10.700	11.133

1/ Group 1 = Student's prior supervised occupational experience program consisted of supervised farming.
Group 2 = Student's prior supervised occupational experience program consisted of off-farm placement in agricultural business.
Group 3 = Student had no prior supervised occupational experience program.

The mean level of occupational aspiration scores for students grouped by their choice of occupation are revealed in Table 21. A multiple comparison of all means indicated that a mean score of 36.366 for Group 2 is significantly greater than the mean scores of 29.048 for Group 1 and 31.605 for Group 3. This difference is significant at the .01 level of probability. No significant differences were observed among all other possible mean comparisons. Therefore, it may be concluded that students who had selected off-farm agricultural occupations

as their occupational choice, desired to be employed in occupations at a higher level of occupational prestige than did students who had selected on-farm agricultural occupations or students who had selected nonagricultural occupations.

Table 21.--Mean Level of Occupational Aspiration Scores for Students Grouped by Choice of Occupation

Group number	Student group	Number	Mean score
1	Students who planned to enter on-farm agricultural occupations	116	29.048
2	Students who planned to enter off-farm agricultural occupations	101	36.366 1/
3	Students who planned to enter non-agricultural occupations	295	31.605
	Total	512	

1/ Mean score for Group 2 is significantly (P. .01) greater than the mean score for Groups 1 and 3.

Hypothesis 7 stated that there will be significant differences in level of occupational aspiration as measured by the Haller Occupational Aspiration Scale, among high school agricultural occupations students grouped according to their prior type of supervised occupational experience program.

The number and percentage of students grouped by their prior type of supervised occupational experience were presented in Table 17. The scores of students representing Groups 2, 4 and 6 were again deleted for this analysis due to small numbers.

The three-way analysis of variance resulted in no significant F ratios for mean scores of students grouped by school size, prior type of supervised occupational experience program, or grade level.

Table 22 reveals the mean occupational aspiration scores for students grouped according to their prior type of supervised occupational experience program.

Table 22.--Mean Level of Occupational Aspiration Scores for Students Grouped by Prior Type of Supervised Occupational Experience Program

Student group	Number	Mean score
Student's prior supervised occupational experience program consisted of supervised farming	263	31.632
Student's prior supervised occupational experience program consisted of off-farm placement in agricultural business	24	30.439
Student had no prior supervised occupational experience program	200	30.919
Total	487	

Since no significant differences were observed, it may be concluded that students' prior type of supervised occupational experience program is not related to the students' level of occupational aspiration.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The purpose of this research study was to determine if there are differences in certain aspects of vocational development among high school agriculture students grouped according to their choice of occupation, grade level, school size, and prior type of supervised occupational experience program. The aspects of vocational development that were considered in this study are as follows:

1. Occupational and educational objectives.
2. Personal, family, and community variables related to occupational choice.
3. Vocational maturity.
4. Work values.
5. Level of occupational aspiration.

Data were collected from junior and senior students in a stratified random sample of 21 Illinois high schools which provided agricultural occupations programs

in 1971-72. Seven schools having a total student enrollment of 210 or less, seven schools having a total student enrollment of 211-390, and seven schools having a total enrollment of over 390, comprised the small, medium, and large enrollment strata, respectively. A total of 512 junior and senior students that was currently enrolled in agricultural occupations courses participated in the study.

In completing the instruments, each student was requested to indicate the occupation he planned to enter upon completion of his formal education. A student's stated occupational choice became the criterion for identifying the following groups:

Group 1 Agriculture students who plan to enter on-farm agricultural occupations.

Group 2 Agriculture students who plan to enter off-farm agricultural occupations.

Group 3 Agriculture students who plan to enter nonagricultural occupations.

The instruments used in collecting the data for the study are as follows:

1. Personal, Family, and Community Data Related to the Occupational and Educational Objectives of Illinois Youth. This instrument was developed to assess the personal, family, and community variables related to the occupational objectives of high school agricultural occupations students.
2. Vocational Development Inventory. This instrument, devised by Crites (25), was selected to measure the vocational maturity of high school agricultural occupations students. Concepts used to write items for the Attitude Scale of this instrument were as follows: involvement in the choice process, orientation toward work, independence in decision making, preference for vocational choice factors, and conceptions of the choice process.

3. Work Values Inventory. This instrument was developed by Super (113) for the purpose of assessing the values which motivate man to work. The values which this instrument is designed to assess are as follows: Altruism, Esthetic, Creativity, Intellectual Stimulation, Achievement, Independence, Prestige, Management, Economic Returns, Security, Surroundings, Supervisory Relations, Associates, Way of Life, and Variety.
4. Occupational Aspiration Scale. This instrument, devised by Haller and Miller (47), is designed to measure the student's level of occupational aspiration, one dimension of the occupational selection process.

Data were collected by administering these instruments to participants of the study during September and October of 1971. Data from the instruments were hand scored and transferred to IBM cards and analyzed using SOUPAC programming for the University of Illinois computer facilities. Statistics used in analyzing the data included chi square, three-way analysis of variance, and Pearson product-moment correlation.

Conclusions

The following conclusions were drawn based upon the findings of the study:

1. More than one-half (57.617 percent) of the junior and senior students included in this study and currently enrolled in agricultural occupations courses planned to enter nonagricultural occupations upon completion of their formal education. Approximately 23 percent of the junior and senior students enrolled in agricultural occupations courses planned to enter on-farm agricultural occupations. The specific occupations these students selected consisted almost entirely of farming. Almost 20 percent of the junior and senior students enrolled in agricultural occupations courses planned to enter off-farm agricultural

occupations upon completion of their formal education. This included the selection of occupations in agricultural mechanics, agricultural supplies and services, agricultural products, ornamental horticulture, agricultural resources, forestry, and professional occupations in agriculture.

2. The student's choice of an occupation was significantly ($P. < .005$) related to his place of residence. The majority (84.48 percent) of students who planned to enter on-farm agricultural occupations were living on a farm. Over one-half (52.48 percent) of the students who planned to enter off-farm agricultural occupations were living on a farm; and 33.33 percent of the students who planned to enter non-agricultural occupations were living on a farm.
3. Students who selected on-farm agricultural occupations were significantly ($P. < .05$) more certain of their choice than students who selected off-farm agricultural occupations and students who selected nonagricultural occupations.
4. "Significant others" influencing student's choice of occupation was significantly ($P. < .001$) related to the type of occupation the student had selected. The majority of students in all three groups indicated that their father was the person who had the most influence on their choice of occupation. However, almost twice as many students who planned to enter on-farm agricultural occupations considered their father as the most influencing person as did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations. Others having considerable influence upon student's choice of occupation include a close friend, a relative, and agriculture instructor. The agriculture instructor had a greater influence upon occupational choices of students who planned to

enter off-farm agricultural occupations than he did for students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.

5. Students who planned to enter on-farm agricultural occupations considered their ability for their selected occupations to be significantly ($P. < .01$) greater than did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.
6. Students who planned to enter off-farm agricultural occupations considered their ability for their selected occupations to be significantly ($P. < .05$) greater than did students who planned to enter nonagricultural occupations.
7. Students who planned to enter on-farm agricultural occupations had received a significantly ($P. < .05$) greater amount of encouragement to follow their father's occupation then students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.
8. Students who had selected off-farm agricultural occupations as their vocational choice planned to engage in significantly ($P. < .01$) more post high school education than did students who had selected on-farm agricultural occupations and students who had selected nonagricultural occupations.
9. The majority of students included in this study considered their father to be satisfied with his present occupation.
10. Students who attended small high schools had fathers who had completed significantly ($P. < .01$) less formal education than fathers of students who attended medium and large high schools. Students grouped on the basis of their choice of occupation had fathers who possessed on the average, less than a high school education.

11. Mothers of most agriculture students included in this study had less than a high school education. Students grouped by their choice of occupation did not differ significantly in regard to the amount of education possessed by their mother.
12. Students who planned to enter off-farm agricultural occupations received significantly ($P. < .01$) more encouragement from their mother and father to obtain post high school education than did students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.
13. Students who planned to enter off-farm agricultural occupations were significantly ($P. < .01$) more vocationally mature than students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations.
14. Senior students included in this study were significantly ($P. < .01$) more vocationally mature than junior students.
15. Student's vocational maturity was not significantly related to their prior type of supervised occupational experience program.
16. Students who planned to enter on-farm agricultural occupations placed significantly ($P. < .05$) greater importance on the work value "Achievement" than did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.
17. Students who planned to enter on-farm agricultural occupations and students who planned to enter nonagricultural occupations viewed the work value "Surroundings" to be of significantly ($P. < .05$) greater importance than did students who planned to enter off-farm agricultural occupations.

18. Students who planned to enter nonagricultural occupations placed significantly ($P. < .05$) greater importance on the work value "Supervisory Relations" than did students who planned to enter on-farm and off-farm agricultural occupations.
19. Students attending small high schools considered the work value "Prestige" to be of significantly ($P. < .05$) greater importance than did students who attended medium and large high schools.
20. Students who planned to enter on-farm agricultural occupations considered the work value "Independence" to be of significantly ($P. < .01$) greater importance in life's work than did students who planned to enter off-farm agricultural occupations and students who planned to enter nonagricultural occupations.
21. Students who planned to enter nonagricultural occupations considered the work value "Economic Return" to be of significantly ($P. < .01$) greater importance in life's work than did students who planned to enter on-farm and off-farm agricultural occupations.
22. Work values possessed by students were not significantly related to the student's prior type of supervised occupational experience program.
23. Students who had selected off-farm agricultural occupations as their occupational choice desired to enter occupations at a significantly ($P. < .01$) higher level of occupational prestige than did students who had selected on-farm agricultural occupations or students who had selected nonagricultural occupations.
24. The prior type of supervised occupational experience program conducted by students was not significantly related to the students' level of occupational aspiration.

25. The degree of certainty possessed by the students regarding their choice of occupations was significantly (P. $<$ .01) related to their vocational maturity. Students who possessed the greater amount of certainty regarding their choice of occupation had higher vocational maturity scores.

26. Students' perception of their ability to perform selected occupations was significantly (P. $<$ .01) related to their vocational maturity. Students who indicated a higher perception of their ability to perform their selected occupations had higher vocational maturity scores.

27. The number of years of post high school education planned by students was significantly (P. $<$ .01) related to their vocational maturity. Students who planned to receive a greater number of years of post high school education had higher vocational maturity scores.

28. The amount of encouragement to continue education beyond high school the students had received from their fathers was significantly (P. $<$ .01) related to the students' vocational maturity scores. Those students who received a greater amount of encouragement from their father to continue education beyond high school had higher vocational maturity scores.

29. The amount of encouragement to continue education beyond high school students had received from their mother was significantly (P. $<$ .01) related to the students' vocational maturity scores. Students receiving a greater amount of encouragement from their mother to continue education beyond high school had higher vocational maturity scores.

30. The students' perception of their ability to perform their selected occupations was significantly (P. $<$ .05) related to tneir level of occupational aspiration. Students who indicated a higher perception

of their ability to perform their selected occupations received higher scores on the Occupational Aspiration Scale.

31. The number of years of post high school education planned by students was significantly ($P. < .01$) related to their level of occupational aspiration. Students who planned to receive a greater number of years of post high school education had higher scores on the Occupational Aspiration Scale.

32. The amount of encouragement to continue education beyond high school students had received from their fathers was significantly ($P. < .01$) related to the students' level of occupational aspiration. Students receiving a greater amount of encouragement from their father to continue education beyond high school had higher scores on the Occupational Aspiration Scale.

33. The amount of encouragement to continue education beyond high school students had received from their mother was significantly ($P. < .01$) related to the students' level of occupational aspiration. Students receiving a greater amount of encouragement from their mother to continue education beyond high school, had higher scores on the Occupational Aspiration Scale.

34. The degree of certainty possessed by students regarding their choice of occupations was significantly ($P. < .01$) related to the students' perception of their ability to perform their selected occupations. Students who possessed the greater amount of certainty regarding their choice of occupations indicated a higher perception of their ability to perform their selected occupations.

35. The degree of certainty possessed by students regarding their choice of occupations was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students

had received from their father. Students who possessed a greater degree of certainty regarding their choice of occupations received a greater amount of encouragement from their father to continue education beyond high school.

36. The degree of certainty possessed by the students regarding their choice of occupations was significantly ($P. < .05$) related to the amount of encouragement to continue education beyond high school the students had received from their mother. Students who possessed a greater degree of certainty regarding their choice of occupations received a greater amount of encouragement from their mother to continue education beyond high school.

37. The students' perception of their ability to perform their selected occupations was significantly ($P. < .01$) related to the amount of encouragement the students had received from their father to follow father's occupation. Students who indicated a higher perception of their ability to perform their selected occupations received a greater amount of encouragement from their father to follow their father's occupation.

38. The students' perception of their ability to perform their selected occupations was significantly ($P. < .05$) related to the amount of encouragement to continue education beyond high school the students had received from their father. Students who indicated a higher perception of their ability to perform their selected occupations received a greater amount of encouragement from their father to continue education beyond high school.

39. The students' perception of their ability to perform their selected occupations was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students had

received from their mother. Students who indicated a higher perception of their ability to perform their selected occupations received a greater amount of encouragement from their mother to continu education beyond high school.

40. The amount of encouragement the students had received from their father to follow father's occupation was significantly ($P. < .05$) related to father's perception of his occupation as indicated by the students. Students receiving a greater amount of encouragement from their father to follow their father's occupation, indicated that their father had a higher perception of his occupation.

41. The number of years of post high school education planned by the students was significantly ($P. < .01$) related to father's perception of his occupation as indicated by the students. Students who planned to receive a greater number of years of post high school education indicated that their father had a higher perception of his occupation.

42. The number of years of post high school education planned by the students was significantly ($P. < .01$) related to the amount of father's education. Students who planned to receive a greater number of years of post high school education had fathers who possessed a greater amount of formal education.

43. The number of years of post high school education planned by the students was significantly ($P. < .01$) related to the amount of mother's education. Students who planned to receive a greater number of years of post high school education had mothers who possessed a greater amount of formal education.

44. The number of years of post high school education planned by the students was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students

had received from their father. Students who planned to receive a greater number of years of post high school education received a greater amount of encouragement from their father to continue education beyond high school.

45. The number of years of post high school education planned by the students was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students had received from their mother. Students who planned to receive a greater number of years of post high school education received a greater amount of encouragement from their mother to continue education beyond high school.

46. Father's perception of his occupation as indicated by the students participating in the study was significantly ($P. < .01$) related to the amount of father's education. Students who indicated that their father had a higher perception of his occupation had fathers who possessed a greater amount of formal education.

47. The amount of father's education was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students had received from their father. Students whose fathers possessed a greater amount of formal education indicated that they had received a greater amount of encouragement from their fathers to continue education beyond high school.

48. The amount of mother's education was significantly ($P. < .01$) related to the amount of encouragement to continue education beyond high school the students had received from their mother. Students whose mothers possessed a greater amount of formal education indicated that they had received a greater amount of encouragement from their mother to continue beyond high school.

49. The students' vocational maturity was significantly ($P. < .01$) related to their level of occupational aspiration. Students who received higher vocational maturity scores received higher scores on the Occupational Aspiration Scale.

Limitations

Any generalizations from this study should be subject to the following limitations:

1. This study was based upon an ex post facto research design. Consequently, no attempt was made to control or manipulate the independent variables.
2. The population for this study consisted of junior and senior students enrolled in secondary agricultural occupations programs in Illinois. Therefore, any generalizations from this study outside the State of Illinois should be made with caution.
3. The sample studied was limited to junior and senior agriculture students. Thus, the extent of generalization to other grade levels or occupational areas should be done with caution.

Recommendations

The findings of this study reveal that there are distinct differences in certain aspects of vocational development among high school agricultural occupations students. Consequently, the following statements appear worthy of consideration by agricultural occupations instructors, vocational guidance counselors, vocational education directors, teacher educators, and many other individuals who are in a position to assist agriculture students in their vocational development.

1. The rate of vocational development and the extent of vocational maturity differ considerably among students of agricultural occupations. Students who planned to enter off-farm agricultural

occupations upon completion of their formal education were more vocationally mature than students who planned to enter on-farm agricultural occupations, and students who planned to enter non-agricultural occupations. Therefore, educators concerned with affecting the direction and rate of vocational development must account for these differences in individual and group guidance, and in planning programs of occupational orientation and occupational training.

2. Comprehensive occupational information and orientation programs should be provided that will assist students of agricultural occupations to continually develop and mature vocationally.
3. Since vocational development is viewed as a continuous, complex process extending over many years, orientation to the world of work in agricultural occupations should of necessity begin in the elementary school and continue through junior and senior high school. However, agricultural occupations instructors and vocational guidance counselors should consider the fact that students will differ in their approach to career orientation and their readiness for such thinking.
4. In providing occupational information and orientation to agricultural occupations students, vocational development should be individualized so that some students may work on information or be exposed to experiences different from other students. This would perhaps account for differences in the rate and extent of vocational development among students.
5. Programmed efforts to facilitate vocational development should begin at the student's level of vocational development and proceed on the basis of personal, family and community variables.

6. Agricultural occupations instructors and vocational guidance counselors should attempt new ways to facilitate vocational development through occupational orientation, curriculum reinforcement, individual and group guidance, and work experience.
7. It appears that parents have a tremendous influence upon the vocational development of high school agricultural occupations students. Therefore, teachers of agricultural occupations should seek new ways to inform parents of the world of work in agricultural occupations.
8. Parents should be given a greater amount of assistance in guiding their children in making wise and realistic occupational choices and in selecting occupational training programs appropriate to their choices.
9. Approximately 40 percent of the junior and senior agricultural occupations students participating in this study had no previous supervised occupational experience program. Schools should provide more supervised occupational experience programs related to the students' occupational objectives.
10. Agricultural occupations instructors and other vocational educators who attempt to provide vocational experiences or help individuals make occupational decisions should consider the work value structure of the individual. Students of agricultural occupations differ in the work values they possess.
11. Many of the junior and senior agriculture students participating in this study were uncertain of their occupational choice, particularly agriculture students who plan to enter nonagricultural occupations. It would appear from the observations made by this researcher that many students select nonagricultural occupations due to their lack

of occupational information regarding the vast array of occupational opportunities in agriculture. Teachers of agricultural occupations should provide greater assistance to students in crystalizing their occupational choices.

12. If the projected manpower needs in agricultural occupations are to be fulfilled, greater efforts should be expended in identifying students who would be interested in an off-farm agricultural occupation as their vocational choice.

13. Considerable variation exists in agriculture student's perception of his ability to perform the occupation he has selected. Many agriculture students who planned to enter off-farm agricultural occupations perceived their ability for selected occupation to be less than did students who planned to enter on-farm agricultural occupations. Consequently, training programs in off-farm agricultural occupations should be expanded to include more intensive training in areas these students feel deficient.

14. Since many agriculture students, especially those who have selected off-farm agricultural occupations, planned to receive post high school education, teachers of agriculture and vocational guidance counselors should provide assistance to these students in selecting post high school training appropriate to their occupational objectives. Articulation between high school and post high school agricultural occupations programs should be emphasized.

15. Parents have a tremendous influence upon the students' plans for receiving post high school education. Therefore, parents should be informed of the post high school education programs appropriately designed for their children's occupational objectives.

16. Agricultural occupations students vary considerably regarding their level of occupational aspiration. If student's level of occupational aspiration is not commensurate with his abilities, agriculture teachers may consider ways of altering his level of occupational aspiration. Student's level of occupational aspiration should perhaps also be considered in planning appropriate work experience programs for students.
17. A number of personal, family and community variables were found to be significantly related tc the student's vocational maturity; many of these variables can be manipulated. Therefore, efforts should be made to determine if manipulating these variables would influence student's vocational maturity.
18. Almost 58 percent of the students participating in this study planned to enter nonagricultural occupations upon completion of their formal education. Since these students were currently enrolled in agricultural occupations courses, it would appear that they do possess an interest in agricultural occupations. Many (33.33 percent) of these students who planned to enter nonagricultural occupations indicated that they were living on a farm. Consequently, greater efforts should be expended by agricultural occupations instructors to assist these students to consider agricultural occupations commensurate with a student's interests and abilities.

REFERENCES

1. Andersen, D. G. and R. A. Heimann. "Vocational Maturity of Junior High School Girls," Vocational Guidance Quarterly, Vol. 15, No. 3 (March, 1967), pp. 191-195.

2. Annan, J. L. Occupational Aspirations of Colorado High School Students. Fort Collins, Colorado: Master's thesis, Colorado State University, 1966. As cited in Summaries of Studies in Agricultural Education, Danville, Illinois: Interstate Printers and Publishers, 1965-67, pp. 10-11.

3. Barthory, M. J. Occupational Aspirations and Vocational Maturity. As cited in Crites, J. O. The Maturity of Vocational Attitudes in Adolescence. University of Iowa, 1969.

4. Beals, H. D. Educational and Occupational Plans and Attainment of Wisconsin Rural Youth. Madison, Wisconsin: Unpublished doctoral dissertation, University of Wisconsin, 1966.

5. Bentley, R. R. "Factors Influencing the Vocational Choices of Agriculture College Freshmen," Agricultural Education Magazine, Vol. 36, No. 6 (December, 1963), pp. 153-154.

6. Blau, B. M. "Occupational Choice: A Conceptual Framework," Industrial and Labor Relations Review, Vol. 9, (July, 1956), pp. 531-543.

7. Broyles, S. C. "The Teacher's Role in Guidance," Agricultural Education Magazine, Vol. 42, No. 2 (August, 1969), p. 29.

8. Burchinal, L. G. "Differences in Educational and Occupational Aspirations of Farm, Small-Town, and City Boys," Rural Sociology, Vol. 26 (1961), pp. 107-121.

9. Burchinal, L. G., et al. "What Influences Farm Boys' Career Choices?" Iowa Farm Science, Vol. 17 (1962), pp. 18-20.

10. Burchinal, L. G. "What About Your Daughter's Future?" Iowa Farm Science, Vol. 14 (1966), p. 9-10.

11. Burchinal, L. G. "What's Your Son Going to Do?" Iowa Farm Science, Vol. 14 (1960), pp. 16-18.

12. Burchinal, L. G. "Who Are Our Future Farm Homemakers?" Iowa Farm Science, Vol. 15 (1960), pp. 13-14.

13. Burchinal, L. G. "Who's Going to Farm?" Iowa Farm Science, Vol. 14 (1960), pp. 16-18.

14. Byram, H. M. Guidance in Agricultural Education. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1966.

15. Byram, H. M. "The Modern Guidance Role of the Teacher of Agriculture," Agricultural Education Magazine, Vol. 36, No. 10 (April, 1964), pp. 219-220.

16. Campbell, R. E., et al. Vocational Development of Disadvantaged Junior High School Students. Columbus, Ohio: The Center for Vocational and Technical Education, The Ohio State University, 1969, p. 3.

17. Campbell, R. E. Guidance in Vocational Education: Guidelines for Research and Practice. Columbus, Ohio: The Ohio State University, 1966. As cited in Crites, J. O. The Maturity of Vocational Attitudes in Adolescence. Iowa City, Iowa: The University of Iowa, 1969.

18. Caplow, T. Sociology of Work. Minneapolis, Minnesota: University of Minnesota Press, 1954, p. 221.

19. Carpenter, E. T. and J. H. Rodgers. Review and Synthesis of Research in Agricultural Education. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, The Ohio State University, 1970, p. 38.

20. Carroll, H. M. Foundations of Guidance. New York: Harper and Bros., 1961, p. 220.

21. Cox, W. L., J. R. Clary, and J. A. Duncan. "I. V. Moves Ahead," American Vocational Journal, Vol. 42 (October, 1967), pp. 30-31.

22. Creech, D. D. A Guide for Developmental Vocational Guidance - Grades K-12. Oklahoma City, Oklahoma: Department of Vocational-Technical Education, State Department of Education, forward p. 2, preface p. 5.

23. Crites, J. O. Research on Vocational Guidance Status and Prospect, (Part II). As cited in Borow, H. Man In a World at Work. Boston: Houghton Mifflin, 1964, pp. 324-340.

24. Crites, J. O. The Maturity of Vocational Attitudes in Adolescence. Iowa City, Iowa: The University of Iowa, 1969, p. 1.

25. Crites, J. O. "The Measurement of Vocational Maturity in Adolescence: I, The Attitude Test of the Vocational Development Inventory," Psychological Monographs, Vol. 79 (1965), pp. 1-36.

26. Crites, J. O. Vocational Psychology. New York: McGraw-Hill Book Co., 1969.

27. Demos, G. D. and B. Grant. Vocational Guidance Readings. Springfield, Illinois: Charles C. Thomas Publisher, 1965, p. 155.

28. Dilley, J. S. "Decision-Making Ability and Vocational Maturity," Personnel and Guidance Journal, Vol. 44 (1965), pp. 423-424.

29. Dobbins, L. H. Educational and Occupational Aspirations and Expectations of High School Senior Boys in Five Louisiana Parishes. Baton Rouge, Louisiana: Unpublished doctoral dissertation, Louisiana State University, 1968.

30. Duncan, J. A. "Introduction to Vocations," American Vocational Journal, Vol. 41 (October, 1966), pp. 34-36.

31. Dutt, K. The Implications of Vocational Development on High School Level Vocational-Technical Education. Harrisburg, Pennsylvania: Final Report, Bureau of Vocational, Technical, and Continuing Education, Pennsylvania State Department of Public Instruction, 1968.

32. Eaddy, V. S. The Influence of Selected Factors on the Vocational Choices of Vocational Agriculture Students in Louisiana. Baton Rouge, Louisiana: Unpublished doctoral dissertation, Louisiana State University, 1968.

33. Evans, R. N. Foundations of Vocational Education. Columbus, Ohio: Merrill Publishing Co., 1971.

34. Flanagan, J. and W. Cooley. Project TALENT: One Year Follow-up Studies. Pittsburg, Pennsylvania: Report of Cooperative Research Project No. 2333, 1966.

35. Flores, T. R. and L. C. Olsen. "Stability and Realism of Occupational Aspiration in Eighth and Twelfth Grade Males," Vocational Guidance Quarterly, Vol. 16, No. 2 (December, 1967), pp. 104-112.

36. Ginzberg, E. Occupational Choice: An Approach to a General Theory. New York: Columbia University Press, 1951.

37. Gonyea, G. G. "Dimensions of Job Perceptions," Journal of Counseling Psychology, Vol. 8 (1961), pp. 305-312.

38. Grant, B. and G. D. Demos. "Pertinent Factors for the Consideration of Students, Educators, and Practitioners," Vocational Guidance Readings. Springfield, Illinois: Charles C. Thomas Publishers, 1965, pp. 7-14.

39. Gribbons, W. D. and P. R. Lohnes. Career Development. Weston, Massachusetts: Report of Cooperative Research Project No. 5-0088, 1966.

40. Gribbons, W. D. and P. R. Lohnes. Emerging Careers. New York: Teachers College, Columbia University, 1968.

41. Gribbons, W. D. and P. R. Lohnes. "Shifts in Adolescents' Vocational Values," Personnel and Guidance Journal, Vol. 44 (1965), pp. 248-252.

42. Gribbons, W. D. and P. R. Lohnes. "Validation of Vocational Planning Interview Scales," Journal of Counseling Psychology, Vol. 11 (1964), pp. 20-26.

43. Gribbons, W. D. "Changes in Readiness for Vocational Planning from the Eighth to the Tenth Grade," Personnel and Guidance Journal, Vol. 42 (1964), pp. 908-913.

44. Gribbons, W. D. "Evaluation of an Eighth Grade Group Guidance Program," Personnel and Guidance Journal, Vol. 38 (1960), pp. 740-745.

45. Grigg, C. M. and R. Middleton, "Community of Orientation and Occupational Aspiration of Ninth Grade Students," Social Forces, Vol. 38 (1960), pp. 303-308.

46. Hadley, R. G. and W. V. Levy. "Vocational Development and Reference Groups," Journal of Counseling Psychology, Vol. 9, No. 2 (1962), pp. 110-114.

47. Haller, A. O. and I. W. Miller. The Occupational Aspiration Scale: Theory, Structure, and Correlates East Lansing, Michigan: Technical Bulletin 288, Michigan State University Agricultural Experiment Station, 1963, p. 40.

48. Haller, A. O., and W. H. Sewell. "Farm Residence and Levels of Educational and Occupational Aspiration," American Journal of Sociology, Vol. 62 (1957), pp. 407-444.

49. Haller, A. O., L. G. Burchinal, and M. J. Jones. Youth Need Help in Choosing Occupations. Lansing, Michigan: Michigan State University, 1963, p. 8.

50. Haller, A. O. "Planning to Farm: A Social Psychological Interpretation," Social Forces, Vol. 37 (1959), pp. 263-268.

51. Haller, A. O. "The Occupational Achievement Process of Farm-Reared Youth in Urban--Industrial Society," Rural Sociology, Vol. 25 (1960), pp. 321-333.

52. Hana, A. M. Work Values in Relation to Age, Intelligence, Socioeconomic Level, and Occupational Interest Level. New York: Unpublished doctoral dissertation, Teachers College, Columbia University, 1954.

53. Harlan, G. E. A Comparison of Differences in Selected Characteristics Among High School Seniors, College Freshmen, Trade School Students, Technical School Students, and Business School Students. Iowa City, Iowa: Unpublished doctoral dissertation, University of Iowa, 1964.

54. Harrod, G. W. and N. J. Griswold. "Occupational Values and Counseling," Vocational Guidance Quarterly, Vol. 9 (1960), pp. 60-66.

55. Hatt, P. K. "Occupational and Social Stratification," American Journal of Sociology, Vol. 55 (1950), pp. 533-545.

56. Havighurst, R. J. Youth In Exploration and Man Emergent. In Borow, H. Man in a World at Work. Boston: Houghton Mifflin Co., 1964, pp. 215-236.

57. Herr, E. L. Decision-Making and Vocational Development. Boston: Houghton Mifflin Co., 1970, p. 43.

58. Hershenson, D. B. "Techniques for Assisting Life-State Vocational Development," Personnel and Guidance Journal, Vol. 47 (1969), pp. 776-780.

59. Hill, W. An Experimental Investigation of the Effect of the Study of Occupational Information on the Stability and Realism of Occupational Choice by Students in a Suburban High School. Philadelphia, Pennsylvania: Unpublished doctoral dissertation, Temple University, 1965.

60. Holland, J. L. The Psychology of Vocational Choice. Waltham, Massachusetts: Blaisdell, 1966.

61. Hollingshead, A. B. Elmtown's Youth. New York: John Wiley Co., 1941.

62. Holloway, L. D. An In-depth Study of the Cooperative Vocational Education Program, Champaign Central High School, Champaign, Illinois. Urbana, Illinois: Unpublished doctoral dissertation, University of Illinois at Urbana-Champaign, 1967.

63. Hoover, N. K. "Teaching for Occupational Guidance in Agriculture," Agricultural Education Magazine, Vol. 36, No. 10 (April, 1964), pp. 226-233.

64. Hoppock, R. Occupational Information. New York: McGraw Hill, 1967.

65. Ivey, A. E. and W. H. Morrill. "Career Process: A new Concept for Vocational Behavior," Personnel and Guidance Journal, Vol. 48 (1968), pp. 644-649.

66. Kaldor, D. R., et al. Occupational Plans of Iowa Farm Boys. Ames: Iowa Agricultural Experiment Station Bulletin No. 508, Iowa State University, 1962.

67. Kantola, G. C. Factors and People Influencing Occupational Selection of High School Seniors in Arizona. Tucson, Arizona: Master's thesis, University of Arizona, 1967. As cited in Summaries of Studies in Agricultural Education. Danville, Illinois: Interstate Printers and Publishers, 1965-67, pp. 126-127.

68. Kaplan, O. "Age and Vocational Choice," Journal of Genetic Psychology, Vol. 68 (1946), pp. 131-134.

69. Kinnane, J. F. and A. Suziedelis. "Work Value Orientation and Inventoried Interests," Journal of Counseling Psychology, Vol. 9 (1962), pp. 144-148.

70. Kuvlesky, W. P. The Non-Attainment of Adolescents' Occupational Aspirations: A longitudinal Study of Rural Pennsylvania Males. University Park Pennsylvania: Unpublished doctoral thesis, The Pennsylvania State University, 1965.

71. Leman, A. M. A Study of Factors Contributing to Vocational Choice in Deaf Adolescents. New York: Unpublished doctoral dissertation, New York University, 1966.

72. Lipsett, L. "Social Factors in Vocational Development," Personnel and Guidance Journal, Vol. 40 (1962), pp. 432-437.

73. Lipsman, C. K. "Maslow's Theory of Needs in Relation to Vocational Choice by Students From Lower Socio-economic Levels," Vocational Guidance Quarterly, Vol. 15, No. 4 (June, 1967), pp. 283-288.

74. Malone, F. E., Jr. A Study of Students Enrolled in Post-High School Public Vocational Education Programs in Iowa During the 1964-65 School Year. Iowa City, Iowa: Unpublished doctoral dissertation, University of Iowa, 1965.

75. Marland, S. P. "Career Education Now," An address presented at the 1971 Convention of the National Association of Secondary School Principals, Sam Houston Coliseum, Houston, Texas.

76. McDaniels, C. "Youth: Too Young to Choose?" Vocational Guidance Quarterly, Vol. 16, No. 6 (June, 1968), pp. 242-249.

77. Middleton, R. and C. M. Grigg. "Rural-Urban Differences in Aspirations," Rural Sociology, Vol. 24 (1959), pp. 347-354.

78. Miller, D. C. and W. H. Form. Industrial Sociology. New York: Harper and Row, 1951.

79. Myers, W. P. The Effect of Neighborhood Youth Corps Upon Vocational Development Variables of Rural Southern Appalachian Youth. Knoxville, Tennessee: Unpublished doctoral dissertation, The University of Tennessee, 1966.

80. Nelson, R. "Knowledge and Interests Concerning Sixteen Occupations Among Elementary and Secondary Students," Educational and Psychological Measurement, Winter, 1963.

81. Norton, J. L. "Current Status of the Measurement of Vocational Maturity," Vocational Guidance Quarterly, Vol. 18, No. 3 (March, 1970), pp. 165-170.

82. Nunnery, M. Y. and B. L. Sharp. "Nature of Vocational Choice," American Vocational Journal, Vol. 38 (October, 1963), p. 29.

83. O'Conner, J. P. and J. F. Kinnane. "A Factor Analysis of Work Values," Journal of Counseling Psychology, Vol. 8 (1961), pp. 263-267.

84. Parker, H. J. "29,000 Seventh Graders Have Made Occupational Choices," Vocational Guidance Quarterly, Vol. 11 (1962), pp. 54-55.

85. Phipps, L. J. Handbook on Agricultural Education in Public Schools. Danville, Illinois: The Interstate Printers and Publishers, Inc., 1965, p. 571.

86. Rhodes, C. I. An Investigation of Certain Socio-Economic Factors Which May Influence Vocational Objectives of West Virginia Vocational Agriculture Students. Morgantown, West Virginia: Master's thesis, West Virginia University, 1966. As cited in Summaries of Studies in Agricultural Education, Danville, Illinois: Interstate Printers and Publishers, 1965-67, p. 188.

87. Richard, C. E. and B. C. Bass. Why Certain College Bound Rural High School Boys in Virginia Did Not Enroll in an Agricultural Curriculum. Blacksberg, Virginia: Staff study, Department of Agricultural Education, Virginia Polytechnic Institute, 1964.

88. Robinson, W. A. Agriculture Interest Score and Other Characteristics of Eighth Grade Boys Related to High School Graduation Major and Employment. University Park, Pennsylvania: Unpublished doctoral dissertation, The Pennsylvania State University, 1967.

89. Roe, A. "Comment," Journal of Counseling Psychology, Vol. 10 (1963), p. 117.

90. Roe, A. "Early Determinants of Vocational Choice," Journal of Counseling Psychology, Vol. 4 (1957), pp. 212-217.

91. Roe, A., et al. "Studies of Occupational History. Part I: Job Changes and the Classification of Occupations," Journal of Counseling Psychology, Vol. 13 (1966), pp. 387-393.

92. Roe, A. Personality Structure and Occupational Behavior. As cited in Borow, H. Man In a World at Work. Boston: Houghton Mifflin, 1964.

93. Roe, A. The Psychology of Occupations. New York: Wiley Co., 1956.

94. Rosenberg, M. Occupations and Values. Glencoe, Illinois: Free Press, 1957.

95. Scarborough, C. C. "But What Is Vocational?" Agricultural Education Magazine, Vol. 34, No. 2 (August, 1961), p. 27.

96. Sewell, W. H. and A. M. Orenstein. "Community of Residence and Occupational Choice," American Journal of Sociology, Vol. 70 (1965), pp. 551-563.

97. Sewell, W. H. The Educational and Occupational Perspectives of Rural Youth. As Cited in Horner, J. T., et al. Factors Relating to Occupational and Educational Decision Making of Rural Youth. Lincoln, Nebraska: College of Agriculture and Home Economics, University of Nebraska, 1967.

98. Shill, J. F. Educational Aspirations, Expectations, and Abilities of Rural Male High School Seniors in Mississippi. State College, Mississippi: Unpublished doctoral dissertation, Mississippi State University, 1968.

99. Shimberg, B. and M. Katz. "Evaluation of a Guidance Text," Personnel and Guidance Journal, Vol. 41 (1962), pp. 126-132.

100. Sisson, E. D. "Vocational Choices of Students from Cities, Towns, and Farms," School and Society, Vol. 54 (1941) pp. 94-96.

101. Slocum, W. L. Occupational and Educational Plans of High School Seniors from Farm and Non-Farm Homes. Pullman, Washington: Agricultural Experiment Station Bulletin No. 564, 1956.

102. Slocum, W. L. "The Influence of Reference Group Values on Educational Aspiration of Rural High School Students," Rural Sociology, Vol. 32 (1967), pp. 269-277.

103. Smith, E. D. "Vocational Aspects of Elementary School Guidance Programs: Objectives and Activities," Vocational Guidance Quarterly, Vol. 18, No. 4 (June, 1970), pp. 273-279.

104. State Board of Vocational Education and Rehabilitation. Applied Biological and Agricultural Occupations 1970-71 Annual Directory of Teachers of Agriculture Occupations. Springfield, Illinois: Miscellaneous Publication, Board of Vocational Education and Rehabilitation, 1970.

105. Steel, G. D. and J. H. Torrie. Principles and Procedures of Statistics. New York: McGraw-Hill Book Co., 1960.

106. Stephenson, R. "Occupational Aspirations and Plans of 443 Ninth Graders," Journal of Educational Research, Vol. 49 (1955), pp. 27-36.

107. Super, D. E. "A Theory of Vocational Development," American Psychologist, Vol. 8 (May, 1953), pp. 185-188.

108. Super, D. E. and P. L. Overstreet. The Vocational Maturity of Ninth-Grade Boys. New York: Teachers College, Bureau of Publications, 1960.

109. Super, D. E., et al. Vocational Development: A Framework for Research. New York: Bureau of Publications, Teachers College, Columbia University, 1957.

110. Super, D. E. Psychology of Careers. New York: Harper and Row, 1957.

111. Super, D. E. "The Critical Ninth Grade: Vocational Choice or Vocational Exploration," Personnel and Guidance Journal, Vol. 39 (1960), pp. 106-109.

112. Super, D. E. "The Structure of Work Values in Relation to Status, Achievement, Interests, and Adjustment," Journal of Applied Psychology, Vol. 46 (1962), pp. 231-239.

113. Super, D. E. Work Values Inventory. Boston: Houghton Mifflin Company, 1970.

114. Teal, H. "Today's Guidance Responsibilities," Agricultural Education Magazine, Vol. 35, No. 6 (December, 1962), pp. 120-121.

115. Tennyson, W. W., T. A. Soldahl and C. Mueller. The Teachers Role in Career Development. Revised edition, Washington: National Vocational Guidance Association, 1965.

116. The Career Information Service - A guide to its Development and Use. West Newton, Massachusetts: Bureau of Vocational Education, Department of Education, 1968, p. 5.

117. Thomas, L. The Occupational Structure and Education. Englewood Cliffs, New Jersey: Prentice Hall, Inc., 1956.

118. Tiedeman, D. V. and R. P. O'Hara. Career Development Choice and Adjustment. New York: College Entrance Examination Board, 1963.

119. Tiedeman, D. V. and R. P. O'Hara. Differentiation and Integration in Career Development. Cambridge, Massachusetts: Harvard Graduate School of Education, 1962.

120. Tiedeman, D. V. "Decision and Vocational Development: A Paradigm and Its Implications," Personnel and Guidance Journal, Vol. 40 (1961), pp. 15-21.

121. U. S. Panel of Consultants on Vocational Education. Education for a Changing World of Work. Washington, D. C.: Government Printing Office, 1963.

122. Venn, G. Man, Education, and Work. Washington, D. C.: American Council on Education, 1964.

123. "Vocational Education Amendments of 1968," Agricultural Education Magazine, Vol. 41, No. 7 (January, 1969), pp. 162-164.

124. Warmbrod, J. R. "Vocational Education and Career Exploration," Agricultural Education Magazine, Vol. 42, No. 2 (August, 1969), pp. 27-28.

125. Well, J. "News and Views of NVATA," Agricultural Education Magazine, Vol. 43 (October, 1970), p. 103.

126. Westbrook, B. W. and J. W. Cunningham. "The Development and Application of Vocational Maturity Measures," Vocational Guidance Quarterly, Vol. 18, No. 3 (March, 1970), pp. 171-175.

127. White, L. E. "Guidance Opportunities in Vocational Agriculture," Agricultural Education Magazine, Vol. 35, No. 9 (March, 1963), pp. 196-197.

128. Williams, R. "The Relationship Between the Vocational Development and Scholastic Achievement of Male College Students." New York: Unpublished doctoral dissertation, New York University, 1967.

129. Zaccaria, J. S. Approaches to Guidance in Contemporary Education. Scranton, Pennsylvania: International Textbook Co., 1969, p. 1.

130. Zaccaria, J. S. Theories of Occupational Choice and Vocational Development. Boston: Houghton Mifflin Co., 1970, p. 37.

APPENDIX A

DATA COLLECTION INSTRUMENTS ARE ON FILE IN THE
DIVISION OF AGRICULTURAL EDUCATION, UNIVERSITY OF ILLINOIS

APPENDIX B

LIST OF HIGH SCHOOLS PARTICIPATING IN THE STUDY AND THEIR GEOGRAPHIC LOCATION

SCHOOLS RANDOMLY SELECTED TO PARTICIPATE IN THE STUDY

School	Agriculture Instructor
Aledo High School Aledo, Illinois	F. A. Schaper
Alton High School Alton, Illinois	William Eagleton
Astoria High School Astoria, Illinois	Gerald Raistrick
Brimfield High School Brimfield, Illinois	William Cinnamon Dick Johnson
Buda High School Buda, Illinois	George Shearer
Delavan High School Delavan, Illinois	Joe Aggertt
Fairfield High School Fairfield, Illinois	Jerry McNeil
Franklin High School Franklin, Illinois	Paul Cranfill
Genoa High School Genoa, Illinois	Jerry Eames
Harrisburg High School Harrisburg, Illinois	George DeLaney
Morrisonville High School Morrisonville, Illinois	William M. Bullard
Newark High School Newark, Illinois	Richard F. Dunn
Norris City High School Norris City, Illinois	Michael Colbert
Pickneyville High School Pickneyville, Illinois	Louis Templeton
Rantoul High School Rantoul, Illinois	Russell Lewey Louis Lamoreux

Ridge Farm High School Ridge Farm, Illinois	Everett Moeller
Ridgeway High School Ridgeway, Illinois	Charles Richey
Rochester High School Rochester, Illinois	Dale L. Barthel, Jr.
Wapella High School Wapella, Illinois	Charles Schettler
Williamsville High School Williamsville, Illinois	Gerold E. Davis
Yorkville High School Yorkville, Illinois	Andrew Anderson

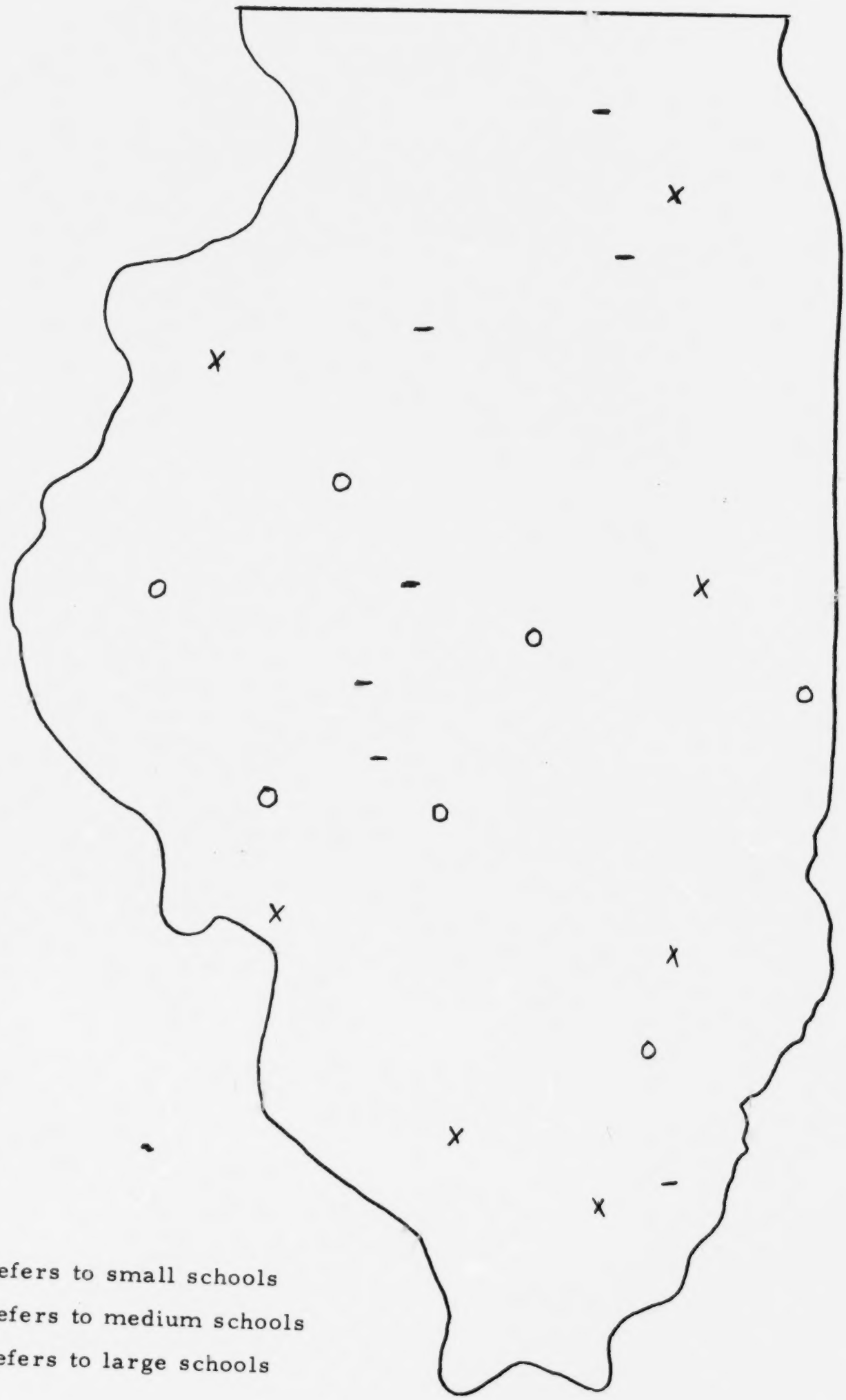

Figure 1. Geographic Location of Illinois Schools Included in the Study